The New York Medical Times

VOL. XX. NEW YORK, APRIL, 1892. No. 1.

ORIGINAL ARTICLES.

NERVOUS MATTER. WHAT IS IT?

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NO PORTION of the human organism is the subject of more persistent and critical investigation, and of more various and speculative opinion, than that denominated the nervous system. Because of the vital influences exercised by it in the animal economy, and its indispensable properties and powers in promoting and ever renewing the energies, by whose activity alone can health be constantly maintained in the living body, it may easily be understood that no part of the organism claims more, or as much, of patient and searching scrutiny than the subject of the inquiry that heads this article. When we ask ourselves the question, "What is nervous matter?" we are naturally embarrassed by the difficulties involved in the solution, even approximately, of the mysterious, and, in many instances, inscrutable powers of this great controlling influence within us. It certainly is not the purpose of this limited paper to review the history of the great nervous system from an anatomical, physiological or pathological standpoint. All this has been amply and ably done, and is constantly being replenished and made more and more valuable by still increasing contribution to the wealth of knowledge and information from the labors of busy and searching investigation in the boundless field of scientific inquiry.

It seems, however, to the writer of this, that there are nervous forces appertaining to certain departments of this grand system which we fail to find in the books devoted to the elucidation and more complete comprehension of this most interesting and important subject. We hold, too, that every influence, physical, mental and psychic, or emotional, that manifests itself in the economy of our bodies, may be, and should be, felt to be worthy of our consideration, whether we be professional or layman, and equally interested in the secret workings of the machinery of life, through whose instrumentality life begins and goes on to the end. It is desirable in conducting an investigation like this, in the contracted space of a journal, to avoid anatomical and other detail as much as possible consistently with what may be absolutely necessary to a clear comprehension of the subject proposed to be considered.

To be brief, then: In order adequately to understand the "quo modo" of the operations of the nervous system, or any part of it, it is indispensable that the nature of the integral elements composing it should be known, as far as our present limited knowledge has reached. Especially is this true of the nerves of special sense, and which involves also the consideration of those portions of the brain from which they proceed, whereby their properties and powers may be interpreted, and their retro-current cerebral influences explained.

To illustrate: Given the knowledge of the ultimate elements of a nerve of special sense—for example, the optic—by which the functional aptitude, or, more properly speaking, the exclusive property of this nerve for the reception and appropriation of luminous rays, and the bestowal of what is called vision to the perceptive faculties of the brain, is there anything in such knowledge by which we can satisfactorily explain this wonderful power so beneficently bestowed upon us, and whose obliteration does indeed pluck the sun from the heavens, and we go groping darkly. We here invoke the patient forbearance of the reader while we tarry a while in the domain of cellulology. It is not proposed to go deeply into the history of primordial cell-birth, so to speak, by tracing cell-evolution from its original protoplasmic, or, more properly, proto-bio-plasmic matrix or matter, but sufficiently near to indicate a differentiation in the character of cells after they shall have reached certain stages of development. The object of this, as may be readily understood, is to be enabled to classify and identify cells according to the different potentialities with which they are endowed, and which they unceasingly exercise as long as their vitality continues. When a cell has attained a certain amount of growth and vitality, both of which it has derived from the intrinsic force of the parental protoplasmic matrix, it assumes its proper place and function, and at once devotes itself to the creation and organization of the object to be produced and called into existence, whether it be animal, vegetable or otherwise, and shall occupy an exalted or degraded position in the realm of animated life. It sets about the performance of the duties assigned to it and imposed upon it by the nature of the integral elements of its own construction. Because of the inflexibility of the physical, chemical and vital nature of those elements, the initial work of reproduction, forma-

tion and vitalization begins and goes on until it is crowned with the completed and perfected product which bears the evidence of its industry and its mysterious potentiality. Briefly, then, we may declare that all the phenomena constituting what is called life, may be said to be the result of the aggregated forces resident in primordial cell existence, and emanating therefrom through the intrinsic energies of propulsive cell-impulse, *compelling* the production and future maintenance of Life itself.

Thus it is that each one of the individual agents by whose united powers every organism "lives and moves and has its being," owes its origin and its characteristic form and feature to the seemingly insignificant entity to which science has given the name of cell, whose inscrutable operations, in many instances, science is equally impotent to detect and define. Our present business is with one of, if not *the* most important and mysterious portion of the human organization —the great nervous system—and we here revert to the initial inquiry, "Nervous Matter. What Is It?"

In order to meet this inquiry, if it can be met adequately, or even approximately, we must again knock at the door and enter and explore the *penetralia* wherein are hidden the secret workings of the laboratory of human life. Among the many wonders there awaiting us, the most wondrous of all will be the object of our present expectant search and investigation. We must find and question the same source from which have proceeded all the rest of the agencies that are busily and constantly at work in our bodies to keep the vital spark always aflame.

We must find and question the nerve-cell. Scattered all through the nervous system are groups of cells of various forms and sizes, intimately associated with each other by what are called their poles, or tentacles, or antennæ, or feelers, and inasmuch as their number varies, we have cells denominated unipolar, bipolar, tripolar, quadripolar, multipolar, according to the number attached to each. Cells also inhabit isolated positions, some possessing individual and specific powers and properties, or holding them in common for general use.

Among the cells are many endowed with an exquisite vitality necessary for the bestowal and maintenance of a specific function, by whose operation a special sense is provided, and we enjoy vision, audition and all the other senses that contribute so much to the happiness and comfort of life. Not only so, but the cells transmit their influences, vital and other, all over the body to its minutest and remotest parts, to every organ, in fine, to every infinitesimal element of its construction. They not only transmit, but receive impressions from without by their efferent and afferent messengers. They also control by the same media the great functions of circulation—by propulsion, vaso motor; by inhibition, vaso stator; of respiration, enforcing constantly the "besoin de respirer," or need for air; of secretion and excretion, and all the innumerable operations that make up life.

Now comes the crucial question, What is this nervous matter that dwells within the little capsule, so to speak, which we call nerve-cell? What is its nature? Whence does it derive its power? By what intrinsic force does it dispense that power? Why does that power differ in different nerve-cells? What makes the exquisite vitality dispensed by the cells of a special sense?

What gives to the optic cell and its afferent nerve the visual power? what to the auditory the power of audition? to the olfactory the multiple sense of olfaction? and what bestows their resplendent superiority over their more humble fellow-cells, whose duties are among the grosser functions of construction and organization? Let us go higher, and ask what relation exists between functional cell-power and intellection itself? If we go down among the lowest and simplest organism, such as the "protamœba," non nucleated, and onward and upward to the "amœba," nucleated, to the commonest of the infusoria, the "paramœcium bursarium," by reason of the inherent vitality, connate and innate in even these degraded forms of life, we discover the primitive beginnings of a power that, in the ascending scale of animated existence, shall ultimately expand, and develop and mature into all the consummate glories, mental and physical, of the perfected man. What does the cellulologist, "pur et simple," say to all this? let us question him. He will immediately serve us up a repast consisting of various courses, and we shall be entertained with dishes of protoplasm, cells, nucleated and non-nucleated, cell-walls, neuroglia, axis-cylinders and other cellulogical jargon. But this is no explanation at all of the difficulty whose solution we seek, and to us it seems that if the veil is ever to be lifted, and if we can ever be permitted to know and understand these wonderful powers of cell-life and cell-force, and how and why they exist and exert their influences, we must question them through their operations upon the living body, and the results of those operations in health and disease. In pursuing this investigation it is proposed not to follow the ordinary method generally adopted, by beginning with the lowest forms of life and going upward, but to consider cell-power under the highest conditions of its administrative potentiality, and then by contrast to determine, if possible, the differentiation in cell dispensation to this, that or the other functional activity, as manifested in the functions of the various organs of the body. Can we by this process reach even nearly the discovery as to why the eye sees, the ear hears, olfaction and taste

exist, etc.? Let us then begin with some of the supreme faculties or powers with which we are endowed, and certainly it seems to us that no more interesting and important subject could be selected for illustration than the consideration of the cell-force resident in the organs of special sense.

CELL-INFLUENCE IN OLFACTION.

In discussing the special sense of olfaction, we propose not only to consider the relations and dependence of this sense upon cell potentiality, but also the intimate connections and associations formed and maintained by the latter between the function of olfaction and that portion, or those portions, of the brain from which the nerves of olfaction proceed. We hope to be able to show that so intimate are these connections and associations, the one with the other, that many of the phenomena, mental and physical, referable to the impressions made upon this special sense are thereby explained, and not only so, but that the perturbations of the mind and body that we often see produced by these same impressions, find their explanation in the unity and continuity of the cells through their poles, or antennæ, and nerves, and the unobstructed transmission to the brain of all external impressions through the links in "Th'electric chain wherein we're darkly bound," so that any influence acting upon the olfactory sense will not only be felt by the body at large, producing disturbance and perversion of many of its proper and normal functions by reflection, but the powers of mentality and intellection will in turn be made cognizant of its presence, and their own individual powers be at once set in operation to explain the nature and character of the intrinsic force.

A CONSERVATIVE VIEW OF PERITONEAL SURGERY IN WOMEN.

By R. Ludlam, M. D.,
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IT IS the practice of some physicians of the present day to deny the value and to disregard the results of peritoneal surgery as applied to the diseases of women. The first position is usually taken by those who are unduly prejudiced against an innovation which has upset so many old notions in uterine pathology and therapeutics; and the second by those who remain in ignorance of what has been accomplished, directly and indirectly, for the physical welfare and comfort of women by and through the abdominal section.

As one who has had his quota of experience on both sides of this question, the author of the following paper respectfully submits what he ventures to style a conservative view of peritoneal surgery in women.

That the abdominal cavity has often been recklessly invaded and its contained organs needlessly exposed; that many women have been operated upon prematurely, and many others also when it could by no possibility do them any lasting good, (too early and too late), will be conceded by those who realize that, in certain quarters especially, gynæcological surgery is very much overdone. The very fact that the improved methods of operating have given a remarkable immunity from fatal results directly after the event has encouraged this propensity, and emboldened those who had nothing to lose by operating, and who, in so far as the patient was concerned, did not care for the ultimate consequences of their lack of judgment and of discrimination.

So also of the published reports of a class of operators who have become very dexterous, not to say distinguished, as abdominal surgeons. Not only have their statistics been so arranged as to mislead the general profession whenever they were not qualified by the author and carefully examined by the reader, but, touching the special pathology involved, the conclusions to which some of them have arrived are very mischievous. For it does not follow that because one can find evidence of tubal or of ovarian disease in most of the cases in which he has seen fit to remove the uterine appendages, therefore, his conclusions concerning pelvic and abdominal pathology are necessarily correct or final. Somebody else must follow up this subject and tell us what the manual operator has not seen, and should not presume to teach, at least not until we all know more of what is being evolved, first by the gynæcologist, and afterwards by the pathologist.

There is a very suggestive parallel between the development of peritoneal and of cranial surgery in modern times. Until recently the opening of either of the cavities involved was accidental, and very little was learned by direct observation of the morbid conditions and processes that lay within them. Nevertheless, by methods of study that were subjective rather than objective—except in the dead-room—or strictly clinical and deductive, very much was accomplished, and the lesions that are peculiar to the contained organs were better known than one would have supposed possible under the limited conditions of research that were afforded.

Naturally enough the obscure points began to be cleared up when the light was let into those cavities, and when all concerned were placed in a position to confirm and to emphasize the value of whatever was good, or to elude and reject whatever was fanciful and misleading in the old tenets. But with the new dispensation in these special forms of surgery there was developed that same old spirit which, directly an original method of treatment is found to be efficacious (no matter how narrow its range), begins to assert that the

old things are entirely passed away, and that this, that, or the other startling proposition is true beyond the possibility of a doubt.

When the ovariotomist had literally opened the way it was a very natural consequence that, by extending the objective study of pelvic pathology from the dead to the living subject, the old views concerning pelvic cellulitis should undergo a radical change; but it was not necessary that what was already and absolutely known of pelvi-peritonitis, ovaritis, and salpingitis, should be peremptorily discarded. With our physicians, as well as with our pupils, the habit of underestimating the old authorities on these and kindred subjects, and rejecting the clinical vintage that they have left us, needs to be corrected and counteracted. For, with some of the leading gynæcologists at least, there is too much that is sensational in their statements and conclusions; too evident a desire to substitute their own hasty views for the riper and more reasonable opinions of others; too great an anxiety to make out a case for operative interference, and a sort of quackish propensity to ascribe everything morbid to a single unmixed cause or condition.

But with all of these drawbacks, there is the probability that the prevalent excess of operative zeal, and the mania for making a laparotomy, with their inevitable consequences, will correct themselves with time and increased experience; and to counteract all this mischief there is the moral certainty that good will inevitably result from the further development of peritoneal surgery in women.

Take, for example, the following paragraph from an opening lecture on the pathological anatomy of metritis.*

"In fact, until within a few years it was very difficult, if not impossible, to make a thorough analysis of the morbid histology of the uterus and of its adnexes. In France, at least, one was only permitted to examine the bodies of those who had been dead for not less than twenty-four hours. Now the uterine mucous membrane is of so delicate a texture, and changes so rapidly in the cadaver, that an examination of it which is made twenty-four hours after death can give only a very imperfect idea of the condition of its cells. It was, therefore, impossible to verify the delicate histological details, or to understand the healthy or the morbid conditions of the cell elements. The histologist should practice the examination of the uterus and of its appendages only in the fresh state, like those that have just been removed by the surgeon. And thanks to the boldness of the surgeons, who in certain cases do not hesitate to remove those appendages, or even the entire uterus—sometimes by laparotomy and sometimes by vaginal hysterectomy—this is what we are now privileged to do. The histological preparations that I shall show you have all been made from these organs after they have been removed, either in the private practice or in the hospital service of my esteemed colleagues, MM. Péan, Terrillon, Pozzi, Routier, Bouilly, etc.; the specimens being brought to me directly after the operation, you can study the lesions of the different tissue elements before any post-mortem change has taken place."

Surely the outcome of this kind of work, more especially in the study of malignant lesions of the uterine mucous membrane, and in their early recognition, will be very practical and useful. We shall not need to make a hysterectomy in a given case in order to decide whether our patient has chronic metritis or some form of carcinoma; but, when these operations are made for just such cause, the opportunity for learning what the fresh specimen only can teach us will no longer be thrown away. And this privilege, with all that can come of it, directly and indirectly, through such histologists as Cornil and his fellow workers, we shall always owe to those who have practiced some form of peritoneal surgery.

Concerning salpingitis, the author from whom we have already quoted says, at page 104:

"Formerly inflammation of the tubes, not only as to its pathological anatomy, but also its clinical history, was imperfectly understood. Aran, in his clinical lectures upon the diseases of the uterus, and Bernutz and Goupil, in their medical clinique on the diseases of women, have reported cases of this kind and have given some symptoms by which it could be recognized. Robin examined the puriform fluid which is sometimes found in the tube on making an autopsy, and he found it to contain large numbers of cylindrical cells, but only a few globules of pus. Vulpian had the same result in a case of salpingitis. It is only in these later years, when we can examine the specimens that have just been removed by an operation, that we can not only study the morbid secretion of the tubes, but also their textures, and can map out the pathological anatomy of salpingitis."

Every competent gynæcologist feels that researches which are based upon what might be called living facts, when they are supported by clinical evidence, may indicate when he shall operate, and when he shall abstain from operating. There is no better safeguard against an abuse of peritoneal surgery in women than the careful work that is now being done by those who, under the most favorable circumstances, are studying the pathological anatomy of the uterus and its appendages. We are almost through the desperate and dogmatic periods in the history of this special form of surgery, and now are passing into that of demonstration, and it will not be

* "Leçons sur l'anatomie pathologique des métrites, des salpingites, et des cancers de l'utérus, faites a l'Hotel Dieu," par M. V. Cornil, Professeur a la Faculte de Medicine de Paris, etc., 1890.

long before what has been so very mischievous will prove to be even more merciful.

The attention that is being given to the surgical treatment of the local forms of tuberculosis when it is situated in the more accessible portions of the body, has its counterpart in what may now be done for tubal, ovarian, and uterine phthisis. We venture another quotation:

"Thanks to the improved surgical technique and to antisepsis, one may now operate within the peritoneal cavity, remove the tuberculous tubes, and even take away a considerable portion of the epiploon that is the seat of tuberculous deposit, without any more danger than if those organs were affected by inflammatory lesions. M. Terrillon and myself have reported upon the histological examination of such tubes that were removed by Dr. Péan, and others by Dr. Routier without any subsequent trouble.* M. Nargean has examined, in our laboratory, a piece of the large omentum that was tuberculous and that was taken from a child which for two years past has had no further illness, and I will soon give you the result of my examination of a tuberculous uterus that was removed in a vaginal hysterectomy by Dr. Péan.

"We can not see why the ablation of the tuberculous womb should be any more dangerous, or have a more serious effect upon the general economy, than an operation for the same disease in any other locality, as for example, upon the testicle. It is true that the diagnosis will be more difficult if the affection is seated in the uterus than it would be if it were in the testicle, and that in the former it is more apt to pass without recognition."

One of the most direct and satisfactory results of abdominal surgery as practiced by the prudent gynæcologist is the improved treatment of pelvic abscess, whether puerperal or non-puerperal. In no other way could we have learned the clinical difference between an abscess of the tube, or of the ovary, and one that is strictly peritoneal. In no other way could we have procured such radical and undoubted results that come of excision, cleansing out the cavity and proper drainage. And what is true of pelvic abscess is equally true of pelvic hæmatocele, hæmato-salpinx, extra-uterine pregnancy, tumors of the broad ligament, and of certain intractable displacements with anchorage of the uterus, or of the ovaries. Which leads us to say that the old screed against the ovariotomist is outlawed long ago, because the peritoneal section is now made for other purposes than the mere removal of ovarian cysts, and that the screed of some of the old ovariotomists against the newer laparotomists is a foolish attack upon the flower and the fulfillment of what was the bud, and the promise of their own work at the beginning.

* *Archives de Physiologie*, 15 *Novembre*.

TUBERCULOSIS.*

By W. J. Eddy, M. D., Shelbyville, Ill.

THERE is no one subject in the domain of medicine or surgery that has claimed so much attention and given so little good results as this one. We find it among all nations, in all climes and attacking all ages, and its methods of attack differ but little.

Many diseases that, a few years ago, were mysterious, are now, by the aid of scientific means, classified as belonging to this category. No matter where you find the disease, it always bears the same characteristics. Taking a piece of tubercular tissue, we find in it little cheesy masses about the size of a millet seed, and if these be mashed up and placed under the microscope, we will find little rod-like bodies scattered through them, that are from 1-15,000th to 1-3,000 of an inch in length; these can be taken out and put in a nidus, and successive crops be raised that, being injected into animal tissue, produce the same results and same kind of nodule as the first were taken from.

When Koch first discovered the bacillus that is the pathognomonic factor in the tubercle, few men were willing to believe that such an infinitesimal mite could be the cause of so much mischief; yet it destroys more lives than war or any great plague. They act only for a short time and in a limited space, yet this is a universal scourge, and scorns the impediments that science tries to throw in its way. We are surrounded by this enemy from the cradle to the grave. It is constantly watching for an unguarded moment in which to make its attack. The air we breathe may be full of these dried germs that have been thrown off from persons suffering the disease. Each mouthful of sputa contains hundreds of them; when the sputa dries up the germs are not destroyed, but simply float off holding their life, but not developing or growing until they find a proper place to grow in. They need heat and moisture to develop in, and with these two elements supplied they can develop in or on anything that will furnish them a food supply, even in vegetable matter; they can be cultivated in the potato, but their best place is in the animal tissue, or rather in blood serum. I don't think they ever grow and multiply in active living tissues, but it must be in tissue that has in some way lost its resisting power, but still retains its heat and moisture. They thrive best in a temperature from 98° to 105° Far., but will retain their vitality in a dried state in a temperature ranging from 40° below zero to 150° above, and will successfully resist all agents of destruction that stop short of destroying living animal tissue; in short, to destroy them we have to destroy the

* Read before a recent meeting of the Military Tract Medical Association.

tissue they are in. Their mode of propagation is by fusion or division. What to-day may seem like a single cell may to-morrow be two, four or eight. They may multiply very rapidly, and from three to eight days are all that is required to raise a crop of them from the first.

Their method of attack is always the same; they are introduced from without. While heredity plays an important part in tuberculosis, yet no person, I think, was ever born that at birth contained the true bacillus. That is a physiological impossibility. There would have to be an intermingling of the blood of the parent and the child for such a thing to be, but the part heredity plays is to give the child a loose, relaxed system, with the lowest possible resisting power that favors easy absorption of the germs and easy effusion of the blood serum into the tissues that furnish a lodging place for them and a proper place to develop in.

There are two points in regard to the disease that are always present:

(1.) The germs must enter from without.

(2.) When they enter the system, to grow they must find a place of lodgment where the blood-current is cut off, where there is heat, moisture and food. These conditions must always be present to have tuberculosis; they must get into a place where they can remain quiet to propagate, and if they come into the blood-current this would be impossible—the blood-current will carry them from one part of the system to another, but they cannot develop in it. To develop they require food, as well as moisture and heat; water alone will not do; they can live indefinitely in it, but they remain in a dormant state. They have not the power to attack strong, healthy tissue, but must rely for food on tissue that has lost, or almost lost, its vitality; if they were able to feed on strong, healthy tissue, no one would be exempt from the disease.

We see this demonstrated in two persons, one with best of physical condition and the other relaxed or worn out, taking cold. Acute congestion of the lungs is the result in both cases, this means serum and mucus thrown out into the air-passage in both, and the germs carried into this through respiration. In the strong healthy person, immediately after the stage of congestion, the pores close up, and although the germs come into the air-cells they fail to get into the lung tissues and are cast off as the product of the air-cell is cast out, while in the other case, the tissues are relaxed, the pores open, the germs are carried into the air-cells and find their way into the lung substance where there is also effusion, and soon develop into a clear case of tuberculosis; or if they happen to pass into the blood current, they may be carried to some remote part of the system and there find lodgment; when through some slight bruise the circulation has become stagnated and there is effusion, they pass into the tissue, and develop a case of local tuberculosis. This we see very frequently in the bones and around the large joints where the circulation is feeblest.

One system resists the attack, while the other favors it; had the weaker system been toned up so as to close all pores as soon as the stage of congestion was over, it might also have resisted it. As long as the germ remained in the air-passage with an impenetrable wall between it and the lung tissues there was no danger, but if the pores remain open, it soon enters into the tissues and causes trouble.

That the germs do not always enter by way of the lungs, we know, for we often see ulcers that from healthy sores take on the tuberculous character from external infection; if the ulcer is not kept in a healthy condition it is apt to become so. Again the germs may enter the circulation from without and find lodgment in some healthy tissue or gland, and not finding a food supply in the way of effusion of some kind, become encysted and lie dormant for a time until their presence acting as an irritant produces the necessary food, and then they develop rapidly.

Having traced the source and modes of infection, we now have to deal with the diagnosis and treatment, and in regard to diagnosis, the microscope is undeniably the most positive means we have; still it is not practicable for every one as yet to use this instrument, but I think the day is not far distant when the physician's office will not be complete without one, if for no other purpose than this. The question then arises, What kind of a glass is needed for such work? An ordinary good stand and an objective that with a C eye piece will give a linear magnifying power of 750 to 1000; although a cheaper way is to have a one-quarter inch objective and an E eye piece, but it is not as satisfactory as a one-eight inch objective with a C eye piece. Now, the matter of preparing the specimen of sputa is one that will give no little anxiety to the beginner. I wish to emphasize here that staining is not a necessity in all cases, for with such a glass as I have described you can see the bacillus without staining, if you have fresh sputa that is not too thick; but if you have a case in which there is doubt and you fail to find the germs, it is best to stain a few specimens. This can be done in a number of ways, but a person wants to take one way and stick to it, and I have known of no better or simpler way than the one called the double stain. It is an analine preparation that you heat until it begins to steam, then pour in a watch glass and take your cover glass with the sputa dried on it and drop it into the liquid, and let it remain five minutes, then remove and wash in methylated spirit until you have the glass as nearly clear as you can get it; then let it dry in the atmosphere and mount in balsam. This is the shortest and

simplest way I know of, to be reliable. Earley's method is good, but it takes time, and that the physician can not always have at his command. I much prefer taking the sputa at first without staining, but if I wish to preserve the specimen of course it must be stained, as the germs become transparent in drying unless stained.

As for general symptoms of tuberculosis every practitioner is familiar with them, and I need not here name them.

When we come to treat a case, there are two points we should always keep before our minds. First and greatest in my mind is to thoroughly disinfect all matter and sputa that might contain any germs, and thus prevent those around the patient or the atmosphere from becoming contaminated.

Second, to stimulate the patient up to the highest point so as to, if possible, make the tissues that are not already involved close up their avenue of ingress and thereby prevent the germs from entering new tissues. It is the height of folly to attempt to use germicides to kill the germs in the system, for what is required to destroy the germ will destroy the tissues. Time will not allow me to think of naming all the so-called wonderful discoveries for the cure of consumption. All we know is that all have been alike *failures*, and to-day we are not much farther advanced than were our ancestors fifty years ago.

Koch's discovery is of value to us when we can use it to excite stimulation enough around a tuberculous patch to close up the avenues of invasion. The infected tissue soon sloughs off and leaves a comparatively healthy surface, but the trouble is, it does not last, for as soon as the effects of the stimulation die out the pores again open to infection, and if there is any particle of tissue remaining that contains germs the whole surface that at first looked to be healthy is again reinfected. This I have seen demonstrated in the hospitals.

We have the same thing occur frequently when we use the knife or cautery. If we can get every bit of the infected tissue out and keep the wound absolutely aseptic, it gets well, but if we happen to leave the least particle of infected tissue, or fail to keep the wound aseptic, we soon have all the new surface infected.

What we want is: *First*, stimulation to close the avenues of entrance and throw off the diseased tissue; *second*, tonicity and strength to maintain this closure, and *third*, aseptic surrounding, air without any germs, so that should there be some relaxation there will be no germs to enter. When we can accomplish these three things we may expect to cure tuberculosis, but until we do we may expect to see this deadly foe of humanity annually sweep off its millions.

The question that confronts us is, How is this to be accomplished?

If I knew I would gladly tell you; but first, for stimulation, we can use counter-irritants, blisters, inhalation of oxygen, medicated steam and sprays, Koch's method, if you like, in some cases, or the knife or cautery—anything that will in any way prevent invasion, and, at the same time, help to cast off infected tissue.

For the second indication, tonicity and strength. We are to use tonics, nutritious foods, change of climate in many cases, out-of-door exercise in good weather, and here is where change of climate does good. Get the patient into a climate as free from germs as possible, as even as you can, and with the greatest possible amount of sunshine, for that has the power of rendering the germs less active, although it does not destroy them. Do not advise a patient to go to a place filled with consumptives; get him away from them; give him air to breathe as free from the germs as possible. California and Colorado, that, a few years ago, were such noted health resorts, are to-day as bad, if not worse, than our own locality, because of the infected matter that has been thrown out into their atmosphere. Try to build up the patient all you can; fill him with iron, the vegetable tonics, cod liver oil, malts, wines and the most nutritious foods, and, together with change of climate, if your stimulation has been successful, you may expect a permanent cure. In general tuberculosis we save about fifteen per cent. by such measures, and in local a much larger percentage.

Our third indication, aseptic surroundings, is harder to comply with than the others, and could we make this perfect we would have little use for the other two. I think it is our duty as physicians to tell patients and friends the danger of infection, and urge upon them the necessity of careful and thorough disinfection of all sputa and other matter from tuberculous patients, and I think it would be well for our State Board of Health to inaugurate as strict rules for this disease as they do for small-pox, scarlet fever and diphtheria. Compel the physician to report every case to the local Board of Health, and then have them devise means whereby people afflicted with the disease could be prevented from throwing the sputa out on the sidewalks and ground without first being subject to disinfection.

Compel the patient to carry a small receptacle, containing some strong germicide, to discharge the sputa into; after it was rendered harmless, then it might be thrown out. Prevention, in this case, I think, would go far ahead of our cures. It might be a good deal of trouble at first to carry out such a plan. But if every physician, and every one knowing of a case of supposed consumption, was compelled, under severe penalty, to report it, and the patient and his immediate friends compelled, under a penalty, likewise to carry out the regulations and orders of the law, I think, in ten years, tuberculosis would decrease twenty-five per cent.

MEDICAL JURISPRUDENCE.

BY DAVID A. STORER,
Counsellor-at-Law, New York.

LIABILITY OF HOSPITAL FOR MALPRACTICE.

A RECENT case in the New York Supreme Court, Second Department, is important, as adjudicating upon the measure of liability for malpractice by the surgeons of charity hospitals.

Bruce Van Tassell brought suit against the Manhattan Eye and Ear Hospital to recover damages for the alleged negligent treatment of plaintiff while a patient in defendant's hospital, whereby plaintiff lost the sight of one of his eyes. This action was brought in Circuit Court, Westchester County, where judgment was given for plaintiff.

An appeal was taken by defendant to General Term, where judgment was reversed and a new trial granted.

From the opinion of Justice Barnard, we quote as follows: "The defendant is a charitable corporation, incorporated by the Legislature, 1869, for the purpose of treating indigent persons suffering from diseases of the eye and ear. The proof shows that the corporation exercised due care in the selection of its physicians. That the operation was one to open the duct which leads from the eye to the nostril, and that it was skillfully done. The only neglect proven consisted in a direction to keep on a bandage over the eye all night after the operation, and in the morning to go to work as usual. The bandage hurt the patient very much during the night. In the morning the sight was gone from the eye. The negligence consisted in the direction of the doctor in the hospital, telling the patient to keep the bandage on all night. The direction to keep the bandage on the eye accords with the experience of all, and there is no reason why it should cause loss of sight. The complaint states an unskillful operation, and, while the evidence is not returned, the charge of the judge (at Circuit) takes it for granted that the operation was well and skillfully done, but that the defendant owed a duty as to the future treatment of the injured part. In other words, if the physician told the patient to keep a bandage over his eye all night, and if that, in the opinion of the jury, was not the proper direction, a case of negligence would be made out against the defendant.

"Without other proof, we think no action is made out. The defendant is not liable, except for the omission to give due care to the selection of its skilled employees, surgeons and others."

CHARITY PATIENT.

The case of Rosa Becker against Janinski, a physician, for malpractice, where $50,000 were claimed as damages—resulting in a verdict for $60 and costs—puts on record seven interesting points of law, applicable to the practice of medicine.

From the charge to the jury by Judge Pryor, in Common Pleas, it appears:

1. MALPRACTICE — DEGREE OF CARE AND SKILL.—A physician, in the treatment of a patient, is bound only to use that reasonable degree of skill and care which is ordinarily possessed and exercised by the profession.

2. SAME—DISCONTINUING ATTENDANCE.—When a physician engages to attend a patient without limitation of time, he can cease his visits only with the consent of the patient, or on giving the patient timely notice, or when the patient no longer requires medical treatment.

3. SAME—CHARITY PATIENT.—A physician may decline to respond to the call of a patient unable to compensate him, but if he undertakes the treatment of such a patient, his duties and liabilities are the same as in the case of any other patient.

4. SAME—NEGLIGENCE OF PATIENT.—A patient whose own neglect or carelessness concurs with the mal-treatment of the physician in causing injury to her, can not recover damages.

5. SAME—MEASURE OF DAMAGES.—In an action for malpractice, damages may be given for past, present and prospective injuries, for expenses incurred, for suffering that the patient has undergone, or will undergo, and for any inability to labor on her own account.

6. SAME—NOMINAL DAMAGES.—Where it is impossible to distinguish between the consequences of the trouble for which the physician was called and the consequences of the maltreatment, only nominal damages can be given.

7. SAME—LOSS OF EARNINGS—MARRIED WOMEN.—A married woman who is not carrying on business or performing labor, on her sole and separate account, can not, in an action against a physician for malpractice, recover for loss of services and earnings.

TESTIMONY OF PHYSICIAN.

Section 834 of the Code of Civil Procedure provides that "a person duly authorized to practice physic or surgery shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity, and which was necessary to enable him to act in that capacity."

This rule, recently brought into unusual public notice by the Harris trial, was qualified by New York Supreme Court, General Term, Third Department, in the case of Herrington *vs.* Winn, where it was held that the physician who attended testator was competent to testify as to his condition at the time of the transaction, where the physician further stated that the information which he obtained while attending testator was not such as was necessary to enable him to act professionally, and that testator's condition was

such that any person of ordinary intelligence could have understood it.

UNBORN CHILDREN AND THEIR RIGHTS.

Mabel Walker sued the Great Northern Railway Company of Ireland in the Court of Queen's Bench, at Dublin, for damages alleged to have been sustained before her birth, through defendant's negligent conduct while plaintiff's mother, who was then pregnant, was a passenger on its road. It was claimed that the injuries so received by the mother permanently crippled the child.

The right to recover was denied, the Court laying emphasis on the fact that the company or its servants did not know anything about the condition of the mother at the time of receiving her as a passenger.

"However the unborn child may be regarded," says the judge, "whether as part of the mother or having a distinct personality, whether an entity or a non-entity, it was, so far as any actual relation the company had with it, a non-entity, and, therefore, the existence of the duty, for the breach of which the defendants would be liable as carriers of passengers, can not be inferred. To infer the existence of such a duty from the mere possibility that the mother was with child when she was received as a passenger by the defendants, would be to act without the sanction of any judicial decision, or of any legal principle."

EXPERT EVIDENCE.

The recent endeavor to ascertain the mental condition of E. M. Field before a Court and jury, was a notable exhibition of the unreliability of expert opinion.

A large number of physicians, alleged to have special knowledge of mental disorders, insisted that the defendant was of unsound mind—and specified many different classes of insanity. And yet, the prosecution had no apparent difficulty in finding an equal number who as strongly asserted his sanity, or, at least, a sufficient degree of it to fix responsibility for crime.

It would seem there can be but two explanations of such divergent views: undue bias from prejudice, or worse, or a deficient knowledge of the subject in question.

In either case, the large number of experts, in all lines, can hardly wonder at the growing distrust of "expert evidence" by Courts and the legal profession. No such array of witnesses, on this especial subject, has been seen in the courts of this country since the trial of Guiteau, nearly a decade ago. And the question still arises, do the insanity experts fully understand their specialty?

As might have been expected, in the Field case, the jury failed to agree.

As the presiding judge has in such cases, without regard to the findings of the jury, the final determination of the question of legal responsibility for crime, and can hardly be expected to be familiar with all the nicer distinctions, conditions and technicalities of mental disorder, would not the ends of justice and the proper uses of "expert evidence" be best served by putting a physician of acknowledged reputation and skill in this particular line, at the service of the Court, to hear and sift the evidence and advise as *amicus curiæ*?

PROFESSIONAL AMENITIES.

The New York *Law Journal*, in commenting upon the case above-mentioned, refers to the "exchange of incivilities" between two physicians called as experts. Each having said the other "made him tired."

"Very probably," says the *Law Journal*, "these learned gentlemen, by giving the sanction of their authority to a new use of an old word, have materially contributed to making decent and classic an expression for the use of which many correct mothers have heretofore reproved many naughty boys.

"But aside from this, the incident set us thinking, and our cogitations took on a somewhat pharisaical cast. Are not our brothers of the medical profession a little given to belittling each other? Do they not, among themselves, exhibit less of a spirit of appreciation, courtesy and kindness of heart than lawyers?

"We have intimated that physicians, as a class, are inferior to lawyers in professional amenity. There are quite obvious reasons for the difference. Until very recently there has been the constant warring of separate schools. The allopaths and homœopaths did not regard each other as independent and honest searchers after truth. The votaries of each school looked upon the followers of the other as victims of charlatanry, if not conscious deceivers. Meanwhile, the public discovered that allopathic doctors could accomplish certain physical results, and homœopathic doctors certain others equally as marked. The two schools have, therefore, flourished side by side, laymen recognizing the practical good in each.

* * * * * *

"It is only natural to find a lack of mutual courtesy among the devotees of different systems and theories. They make each other 'tired,' because they do not respect each other. One man's pet hypothesis is another's laughing-stock.

"At the Bar there is never the pretence of absolute knowledge. The flexibility of jurisprudence and the uncertainty of results are constantly admitted by advocates themselves. We think among younger and more progressive physicians there is growing up an open-minded spirit, which leads them to welcome truth and give credit to real merit, no matter what may be their sources.

Such spirit will unquestionably add to professional efficiency as well as improve professional manners."

INJURIES FROM MERE FRIGHT NOT ACTIONABLE.

An action was brought in Pennsylvania by Eva Ewing against C. C. and St. L. Railway Co., alleging that in a collision occurring on defendant's track, railroad cars were derailed and fell on plaintiff's premises and against her dwelling house, and that plaintiff, who was then within said dwelling house, was subjected to "great fright, alarm, nervous excitement and distress, whereby she then and there became sick and disabled, and continued to be sick and disabled from attending to her usual duties, and suffered and continues to suffer great mental and physical pain and anguish, and is thereby permanently weakened and disabled."

The Supreme Court held, on demurrer, that the complaint stated no cause of action, saying in part, as follows:

"It is plain from the plaintiff's statement of her case that her only injury proceeded from fright, alarm, fear and nervous excitement and distress. There was no allegation that she had received any bodily injury. If mere fright, unaccompanied with bodily injury, is a cause of action, the scope of what are known as 'accident cases' will be very greatly enlarged; for in every case of a collision on a railroad, the passengers, although they may have sustained no bodily harm, will have a cause of action against the company for the 'fright' to which they have been subjected. This is a step beyond any decision of any legal tribunal of which we have knowledge.

"Negligence constitutes no cause of action unless it expresses or establishes some breach of duty. What duty did the company owe this plaintiff? It owed her the duty not to injure her person by force of violence; in other words, not to do that which, if committed by an individual, would amount to an assault upon her person. But it owed her no duty to protect her from fright, nor had it any reason to anticipate that the result of a collision on its road would so operate on the mind of a person who witnessed it, but who sustained no bodily injury thereby, as to produce such nervous excitement and distress as to result in permanent injury; and, if the injury was one not likely to result from the collision, and one which the company could not have reasonably foreseen, then the accident was not the proximate cause."

DIVORCE IN NEW HAMPSHIRE.

While divorce, *per se*, is hardly within the scope of medical jurisprudence, the case below was of a nature to make it directly so.

The cause—alleged to be sufficient, is so novel as to make it interesting, not only to the medical profession, but to the thoughtful reader, professional or otherwise. This must be our apology for the lengthy quotation of the opinion of the Court.

In the case of Robinson *vs.* Robinson, Supreme Court of New Hampshire:—the plaintiff was a man of peculiar disposition and morbid temperament. For two years after marriage with defendant their relations were happy. At the expiration of that period she became a believer in "Christian Science" and thereafter commenced to practice as a "healer" and continued to do so in spite of her husband's objections. It appeared by a large number of witnesses, that plaintiff became morose, despondent and neglectful of his business. And it was sufficiently established that the reason of the change in his habits was his wife's persistence in the practice of "Christian Science." Four physicians testified that the causes which produced his mental distress, if continued, would endanger his reason and undermine his health.

It was shown that defendant, in embracing and practicing "Christian Science," intended no harm or injury to her husband or his business. She is sincere in her belief in the truthfulness of the doctrine. Testimony was introduced as to her character for kindness, tenderness, generosity and peaceableness as woman, wife, mother and neighbor. The evidence established that her character in these respects is good, and that she possesses all these qualities.

The Statutes of New Hampshire provide, that "a divorce shall be granted * * * * (5) when either party has so treated the other as seriously to injure health: (6) when either party has so treated the other as seriously to endanger reason." Under these provisions a divorce was granted to the husband, the Court saying, in part, as follows:

"The provision is to be construed in view of the mischief it sought to cure. It was intended to provide for a divorce of the parties in cases of the character referred to, when the conduct complained of did not fall within the established definition of extreme cruelty. It gave by legislation the relief which the English Courts, pressed by the weight of the same considerations, have gone far to afford—and which the Courts of same jurisdictions, under like pressure, have afforded by a more liberal interpretation of the term 'cruelty.' Whether one party has been so treated by the other as seriously to injure health or endanger reason, is a pure question of fact. It can not be declared as matter of law, that any particular treatment may not have that effect. The gist of these causes of divorce is, the injury to health and the danger to reason. Conduct which to a serious extent produces either, though not intended to have such a result, though it be 'purely self-regarding' and not 'directed towards' or 'forced even upon the knowledge of' the other party,

'otherwise than by the usual intimacy of matrimony,' is a cause for divorce. Any behavior of one party which affects the other, physicially or mentally, is 'treatment' within the meaning of the statute. A narrower sense can not be given to the language used, without ignoring the extent of the evil to be cured and depriving a large proportion of those who suffer from it, of the protection the Legislature intended to provide for them. The purpose of the Legislature was, to make the remedy co-extensive with the mischief. A malevolent motive in the party complained of, need not be shown. Divorce is not a punishment of the offender, but relief to the sufferer. Whether the behavior proved is a sufficient ground of divorce depends on the question whether it has seriously injured health or endangered reason. This is the sole test. The question is not whether the treatment reasonably ought or could reasonably be expected seriously to injure the health or endanger the reason of a person of ordinary intelligence and mental strength; but whether it has in fact had that effect upon the health or reason of the person complaining. A course of conduct which would drive one person crazy might have no effect on, or even be grateful to another and perhaps more sensible or less sensitive person; but he or she whose reason is imperilled by it is not therefore to be compelled to endure the treatment. That the conduct complained of is in itself innocent, or even laudable, and is pursued from a sense of duty, does not afford a sufficient reason for requiring the party injured by it to submit to the destruction of health, reason or life. The abstract reasonableness of the treatment, or its effect upon reasonable persons of ordinary firmness, does not enter into the question—if it did, the redress intended by the statute could not, in many cases, be obtained.

* * * * * * *

"The case finds that the defendant's conduct, as therein detailed, has seriously injured the plaintiff's health, and the court can not say that the finding is not warranted by the evidence."

The foregoing opinion would furnish a text for a volume of criticism, but we may only briefly consider it.

The reasoning of the court seems fallacious, and, to those of his fellow-citizens who would rather that the family relations were surrounded by greater safeguards, even pernicious. Can it be possible that the court has rightly apprehended the intention of the Legislature? If he has, it would be only one more step in the same direction, for the law-making power to leave the entire question of divorce, for any cause, to the discretion of the court or jury. The statutes of New York go so far in this direction as to provide that an action for separation may be maintained for the following, among other causes: "Such conduct on the part of defendant towards the plaintiff as may render it unsafe and improper for the former to cohabit with the latter."

Here the objectionable conduct is more clearly specified, but it would seem that the legislative intent was the same in New Hampshire, and not such as to grant a divorce from a woman who is admitted to possess a "character for kindness, tenderness, generosity and peaceableness, as woman, wife, mother and neighbor."

If the above interpretation of the law is right, why may not differences of opinion in religion, politics, personal taste—and even the doing of church and Sunday-school work, in opposition to the wishes of husband or wife, "injure the health or endanger the reason" of the objecting party, and be sufficient cause for divorce?

As to the plaintiff in this case, he seems to have been in need of an able-bodied mother, or governess, rather than a wife, and will hardly have the sympathy of well-meaning people.

THE CLIMATE OF FLORIDA.*

By E. M. Hale, M. D., Chicago, Ill.

WHEN the physician sends a patient to Florida for his or her health, and does not specify the part of the State his patient ought to go to, he shows a lamentable ignorance of that State, for Florida has several distinct climates, and that portion of the State which is good for one patient may be injurious to another. It is the general belief among the laity, and most of the medical profession, that the whole of the State of Florida is low, damp and malarious. Now, this is not true. It only applies to one or two sections of the State.

I have divided the State horizontally into three divisions, namely: Upper Florida, reaching from 31 degrees to 29½ degrees of latitude; Middle Florida, from 29½ degrees to 27½ degrees, and Lower Florida, from 27½ degrees to 25 degrees, or nearly to Key West.

Now, when I tell you that each of the above divisions represents a quite different climate, you need not be surprised. Upper Florida is like Georgia and Alabama, where frosts and snow are not infrequent, and cold northwestern and eastern winds are quite trying to any invalid.

The fruits of this region are different from the other divisions. There is no doubt that every decade, or century, the whole of Florida is growing colder. Oranges and lemons, bananas and figs once grew as far north as Charleston, S. C., and St. Augustine was once the center of the orange-growing region. Now the oranges are a failure north of Jacksonville and an uncertain crop in the latitude of St. Augustine and Pensacola. But in this region the pear, peach, grape and

* Read before the American Health Resort Association.

plum grow and reach their greatest perfection. The mean temperature of this region in winter is 60 degrees and in summer 80 degrees. Now, it is evident that we can not send all patients to this climate in winter. Those who are troubled with rheumatism, pulmonary disorders, catarrh and bronchitis do not do well here. The change in temperature from noon to evening is great, and the sudden coolness that comes with the dark is dangerous to patients with sensitive lungs, unless they take excellent precaution and keep indoors in a temperature as nearly that of the day as possible. In this region a fire in the stove or fireplace in the evening is indispensable from the 1st of November until the 1st of April, and during the prevalence of "northers" patients should not stay out of doors.

In Middle Florida the mean temperature in winter is 70 degrees, in summer, 80 to 85 degrees. The northers are not as severe, especially inland, and the nights are warmer, but the same precautions should be taken during the winter months, for the fall in temperature from five to nine o'clock P.M. is often 10 degrees. Often in winter the heat of the sun from ten A. M. to three P. M. is intense. I mean the direct rays of the sun, for if you are in the shade of a tree, or under an umbrella or a piazza, you do not feel the heat. Many patients catch cold in Florida from ignorance of this fact. They walk in the sun and get heated and perspiring, they sit down in the shade, and soon find they feel chilly, and the result is an illness. This climatic peculiarity is not confined to Florida, but belongs to Mexico, California, New Mexico, Spain, Italy, and even Algeria. I think in no part of the world did I feel the evening change so unpleasantly as in California, on the Pacific slope. In Cuba and Jamaica and the Bermudas the change at night is not so abrupt—and very much less. In Cuba in January and March it is scarcely felt, the thermometer not dropping more than 4 degrees at night. Not all of Middle Florida has this sudden cool change in the evening, for there is a portion on the Gulf coast that is more even in temperature, because there is less average humidity in the air, but I shall refer to this further on.

This Middle Florida is the orange belt—where that fruit grows to perfection. It reaches from Palatka to Charlotte Harbor. The lemon, lime and grape fruit grow in this region, particularly below the twenty-eighth degree. Above that it is sometimes injured by frosts, for they are more sensitive to frost than the orange. The grape does well in this region, and the prospects are that certain portions of it will become a profitable wine producing country. Below the twenty-eighth peaches, plums and pears do not grow as well and their cultivation is unprofitable. But the guava, fig, pomegranate are successfully grown. In the drier portions of Middle Florida nearly all patients with catarrhal troubles, bronchial and pulmonary disorders, rheumatism, neuralgia and Bright's disease are very much benefited in winter and also in autumn, summer and spring, but at all times of the year they should avoid the low lands, the borders of rivers, unless high, and the swamps, sea and gulf coast. Lower Florida is essentially tropical, as much so as the West Indies. The winters are warm and delightful. The heat in the middle of the day sometimes reaches 85 or 90 degrees, but the nights are not as cool as further north, rarely cooler than 70 degrees. Consumptives will find the Atlantic coast from Rockledge to Biscayone Bay, and the Gulf coast from Tarpon Springs to Fort Myers, and beyond, a climate in winter which is as near perfect as any found in the United States. Some consumptives will find the interior of the State to agree with them better, but such location is difficult of access now, except along the line of railroad from Sanford to Tampa.

This favored region is a paradise for neurasthenics, for nerveless and nervous men and women, broken down in mind and body from the intense strain of business and social demands in our Northern States. The soft, languorous air lulls them to sleep at night and soothes them by day. There is no region of the United States that can compare with this, unless it be some quiet, warm valleys, lying on the eastern slopes of California, Arizona or New Mexico. Nearly all diseases of the heart, functional and organic, are benefited by the climate of middle and lower Florida. In the regions above named most of the semi-tropical fruits grow. The pineapple, cocoanut, pawpaw, cherimoya, grape fruit, bananas, and many others found in the West Indies and Central America can be successfully cultivated. Injurious frosts do not occur in this region more than two or three times in a century.

Now that I have described the three great divisions of the State, I will call your attention to other divisions and their relations to invalids.

You will observe that the river St. Johns runs along the eastern third of the State, about twenty miles from the Atlantic and sixty miles from the Gulf. You will observe the Suwanee River rising in Georgia and emptying into the Gulf of Mexico, and the Calosohatche River running from Lake Okechobee to Charlotte Harbor. Along the course of these rivers, where the ground is low, called "low hammocks," are the only malarial regions in Florida. Northern people have an idea that the whole of Florida is malarious. This is an error. Florida is no more malarious than many Northern States. In fact, not as malarious as Missouri, New Jersey or Connecticut, and when it is malarious the type of fever is not as severe as in the above States. In the winter, from November to May, there is no swamp malaria at all. Tourists and winter visitors often contract a disorder which they think is malaria,

but is not. It is the result of two causes, namely: Exposure to night air and to the bad sewerage of some Florida hotels. Many of the hotels in Florida are wooden structures, put up in a hurried manner, and with but little regard to hygienic principles. The same may be said of many of the hotels in California and all other parts of the United States. Improper eating and drinking at these hotels is a common cause of the so-called malarious fevers.

When you send patients to Florida, tell them to avoid the margin of these rivers; to avoid exposure to sudden change of temperature and all excesses in eating and drinking or residing in damp, low houses.

In studying the topography of Florida there will be found an elevation, composed of pine lands, called high, rolling pine lands, midway between the river St. Johns and the Atlantic coast. This land is elevated thirty to forty feet above the river and the Atlantic. On the western side of the river St. Johns, midway between that river and the Gulf, is a prolongation of the Alleghanies —extending almost down to Tampa, and at places nearly to the Gulf. This "ridge" is elevated in some places 200 and often 400 feet above the sea. It is on these ridges—on both sides of the St. Johns—that patients of all kinds should go, on account of the dryness of the air, the influence of the pine forests, and better facilities for house drainage.

On examination of the War Department weather maps you will see that the humidity of Florida is the same as the whole Atlantic coast as far north as Maine. But the humidity or dampness of an atmosphere is greatly modified by sunshine. Now the weather maps show that the mean cloudiness in Florida in winter is about the same as California, which makes the dampness of the atmosphere relatively less than any other part of the United States, except California, New Mexico and Arizona. A curious feature of the climate of Florida is that the most sunny portion of Florida is on the west coast. That area is represented by a segment of a circle, bending eastward, and reaching from Tarpon Springs to Charlotte Harbor. This area is as dry as the California coast. But admitting that Florida is not as dry as the Pacific coast, it is no objection to that State. Dryness of the air is not always a desideratum in disease, as any one who has sent patients to the dry regions west can testify. Sunshine is of more importance than dryness in consumption and all nervous diseases. It is an indisputable fact that a dry climate is not favorable to recovery in all cases of consumption and all diseases characterized by nervous erethism and pain. Excessive dryness aggravates neuræsthenia, chorea, neuralgia, and similar disorders. Some cases of rheumatism, bronchitis, and phthisis do better in a moderately damp climate, provided there is abundance of sunshine. Dr. Dennison does injustice in his table of relative dryness when he gives Jacksonville, Fla., as representing Florida. The fact is that Jacksonville is the dampest place in that State, except Pensacola. St. Augustine, Deland, Enterprise, Tarpon Springs, and Tampa are all drier than that city.

I will make one more observation, and that is relating to Florida as a sanitarium for children. For many years I have sent infants and children to that State in the winter, and have not in a single case had cause to regret it.

Our Northern winters are very injurious to delicate children. They suffer from catarrhal affections, not only of the air passages, but of the intestinal tract. They have croup, bronchitis, tonsilitis, indigestion, diarrhœa, and all the disorders arising from intestinal and gastric catarrh.

They become so sensitive to cold and dampness that they are deprived of sunshine and open air. They grow paler, emaciated, feverish and fretful.

If you send such children to the highlands of Florida or its sea and gulf coasts you will be surprised at the rapid improvement.

In a few weeks they will be able to stay out of doors all day and eat almost anything with impunity. They should not be allowed to return North before the month of May. If they begin to feel unpleasantly the warmth of April, which they rarely do, they should return North as far as Aiken, S. C., or Hot Springs, N. C.

In this brief paper I have given you the results of my experience and observation of ten years.

I shall be gratified if I have given you a better estimate of the climates of Florida.

INFLUENCE OF GRIP UPON THE FEMININE CONSTITUTION.

By Louise Fiske Bryson, M. D., New York.

THE action of the poison of grip upon the feminine constitution was recognized by early medical writers. The special influence of a pathological entity that manifests itself in so many different ways the ancients could not, of course, appreciate as the observers of to-day. An interesting contribution to this subject is a paper in *Médecine Moderne*, February 18, 1892, by Labadie Lagrave, who finds that in women the chief accidents of grip are abnormal manifestations in the genital tract and in the nervous system. Of the former menorrhagia and metorrhagia are the most common, accompanied sometimes by hæmorrhages from different organs. This condition has given rise to the idea that there may be a hæmorrhagic variety of grip. Law called attention to the frequence of metorrhagia in epidemic influence as early as 1779. Müller reports forty-six well-authenticated instances of genito-uterine abnormities dependent upon grip. Gotts-

chalk's records show obstinate metorrhagia on the first or second day, with increase in the size of the uterus and softening of the cervix as at the beginning of pregnancy. Mijnlief, during the recent epidemic at Breukelen, observed even more significant phenomena. Menstruation appeared coincidently with grip, after suppression during four months. And in one patient of fourteen, the establishment of this function dated from an attack of influenza. Ovarian congestion, with pain on pressure, increase in size and sensitiveness of the uterus, and intercostal neuralgia, are reported by Bidon. In some cases, grip has converted subacute endometritis and salpingitis into acute inflammations.

Nervous manifestations of grip in women present nothing special as regards sex. They are simply more frequent, owing to the greater motility of the feminine nervous system, and manifest themselves as all varieties of neuralgia, and as hysteria or even mania in predisposed subjects. Jutrosinski gives an interesting account of a woman who suffered from an attack of puerperal mania in 1886, made a complete recovery, and in whom mental troubles again appeared in 1889, under the influence of grip.

Concerning grip and the puerperal state, the French accoucheur, Peu, wrote in 1675 that "the disease has such a profound effect upon pregnant women that they either die of inflammation of the lungs or from the effect of a miscarriage with much hæmorrhage." Remarkable susceptibility to infection during the recent epidemics has been noted by Meyer, Trossat, Lepage, Debasker, etc., among puerperal women of our own day. In an earlier time there was also a marked tendency to pus formation among the recently confined. That this is no longer general, is due to the fact of modern care and precaution in the management of the parturient state. As late as 1875, Bonnemaison announced the simultaneous appearance of erysipelas and grip. Recently there have been many cases of abscess in women, due to grip and purulent conjunctivitis. Pneumonia and broncopneumonia, during the recent epidemic, attacked pregnant and parturient women with about equal facility, and terminated the lives of a certain number at the Paris Maternity. In others who had no cardiac trouble earlier, the pulmonary difficulty was followed by heart-strain. Bucquoy, in 1875, speaks of forced heart in general. "Never before," he writes, "have I seen symptoms of asystolic due to impeded respiration supervene so readily." Albumenuria is also a frequent complication of grip among pregnant women.

In the *Edinburgh Medical Journal*, February, 1892, the "Influence of Influenza upon Women" is also discussed by Dr. Robert W. Felkin, who looks upon the disease as dengue modified by climate. This view is based upon the history of various epidemics of dengue the writer of the paper witnessed in Africa, and to 300 cases of influenza treated in Great Britain, together with three attacks that he himself experienced. The tendency of grip to attack women about the menstrual period, Brakenbridge noted in 1890. Felkin cites numerous cases of miscarriage and menstrual abnormity due to grip, conditions that may have been the result of high temperature, ovarian irritation, or, possibly, to irritation caused by the rash that was usually present. The crisis in dengue is shown by pain in the groin and testicles in men. And why should not a similar irritation occur in women? One peculiar phenomenon is recorded. A woman forty-nine years old in whom the menopause had been established five years before, had a period of apparently normal menstruation coincident with the onset of grip. It is possible that the genital disturbances in women are all the outcome of nervous disorder, and are somewhat similar in origin to grippal neuroses and psychoses. Recent contributions to the study of epidemic influenza, from every point of view, will make it impossible for the medical world to fail to recognize it, however varied its manifestations, when it appears in the future.

CLINIQUE.

EMPHYSEMA OF SKIN.—A RARE CASE.

BY JOHN ARSCHAGOUNI, M. D.,

Senior House Physician and Surgeon, Ward's Island Hospital, New York.

J. W——, aet fifty, plasterer, was admitted in this hospital on November 30, 1891, in the surgical ward C, Division I., with a diagnosis of *contusions*.

History.—Had pleurisy some years ago; is subject to rheumatism. Two weeks ago he got a cold, which grew gradually worse. On Sunday, November 29th, at about 4 A. M., he fell down a flight of stairs and struck his right shoulder and all along his back.

Subjective.—Dizziness, vision somewhat dim, mouth feels slimy, sticky, no marked thirst, sensation as if a dagger was passed into right breast and twisted around, worse on coughing; tickling sensation beneath center of sternum, causing a hard, hacking cough; sputa, tough, greenish-yellow, of rotten taste; smothering sensation on laying on his back, relieved by recumbent position; appetite poor; costive; urine dark red, almost boiling hot. Temp., 102; pulse, 120; resp., 22.

Physical.—All over the right side of chest, antero-posteriorly, the skin is raised about two inches high. Same condition is found extending down the right side of the abdomen and across the bladder. It feels to the touch as if the tis-

sues were full of air; a boggy feeling; expansion poor; breathing mostly abdominal.

Percussion.—On left side is O. K.; the right side is dull, on account of the cushion-like, emphysematous condition, and, for the same reason, auscultation is impossible, for nothing but that peculiar crackling sound is heard.

Auscultation.—As far as possible, reveals on the left side some loud breathing sounds, and low down the axillary region of same side some mucus rales.

This case, as seen by the above signs, could be divided into two conditions.

1st. Bronchitis, which surely followed the cold of two weeks ago.

2d. Emphysema of the cellular tissue, which followed the traumatism.

I make this distinct division, as part of the subjective symptoms and physical signs belongs to the former trouble and remaining to the latter.

I was familiar with the first, but the second condition was quite new to me.

There was certainly air in the cellular tissue antero-posteriorly of the right side of the chest, but, in order that air can get there, entrance must be had from without or from within. No sign whatever from outside, nor could I locate any fracture of ribs; neither attribute this condition to gas formation from degenerated tissues, as no evidence of this nature existed.

However, considering the most important symptoms, both subjective and physical, antimonium tartaricum, 3x, was prescribed on that evening by my colleague, Dr. A. C. Calisch; patient supported by rest, keeping him thus in sitting posture.

On December 1st, A. M., temp., 101⅘; pulse, 110; resp., 21.

Dr. Alfred K. Hills, on my request, kindly examined the case, recognized the rarity of it, and, failing to find any fracture, suggested *pressure*, to be applied upon the emphysematous area.

The condition being more or less same, I gave, A. M., ℞.: Antimonium arsenicosum, 3x. At 6 P. M., temp., 101⅘; pulse, 116; resp., 21. ℞.: Arnica, 6x.

On December 2d, A. M., temp., 99⅘; pulse, 86; resp., 20. ℞.: Continue arnica, 6x. At 6 P. M., temp., 100; pulse, 80; resp., 20.

On December 3d, A. M., temp., 99; pulse, 78; resp., 19. ℞.: Arnica, 6x. At 6 P. M., temp., 100⅘; pulse, 80; resp., 20.

On the 4th, A. M., temp., 99⅘; pulse, 80; resp., 19. Patient, although gradually doing well, still no change in the emphysematous condition. At 6 P. M., temp., 100; pulse, 80; resp., 19.

Having found no statement of such condition in treatises on diagnosis known to me, *i. e.*, Flint's, Loomis', Da Costa's—this latter speaks*, under the heading "Expression of Countenance," as follows: "A partial increase, or a swelling, arises from the local extravasation of fluid or air into the cellular tissues. If air, the tissues crepitate under the finger; if fluid, the skin pits under pressure."

I began to wonder how this air could enter the cellular tissues without fracture of rib or injury outside. I finally came to the following conclusions, which I now bring before the criticism of the profession, hoping to be enlightened by their kind suggestions:

This patient had pleurisy, consequently must have had marked adhesions. During the fall the antero-posterior walls of the chest must have been compressed, first, by the force of gravity; second, by the weight of the body; and, finally, by the concussion; and, all put together, would lengthen the transverse diameter of the thorax, the right side most particularly in this case. This sudden forcible lengthening must have *caused a tear of old adhesions, both from visceral and parietal pleuræ*, with the former some of the lung tissue being also torn, and with the latter some of the intercostal muscular tissue. Thus from one side allowing air from the lungs to rush into the pleural cavity, forming a pneumothorax, and, on the other hand, this same air finding its way through the parietal tear, enter forcibly into the cellular tissues, spreading all over the antero-posterior surface of the right chest and little further, as found by objective and physical signs.

On December 5th, A. M., temp., 99⅘; pulse, 84; resp., 19.

My visiting surgeon, Dr. J. H. Thompson, examined the case and found no fracture of ribs, confirming also the rest of the condition stated above. I had explained to him my view of the cause; he found it quite possible. He ordered mustard cataplasm over the emphysematous area, and ℞.: Merc. sol, 3x. This drug covers some of the symptoms exhibited by the patient; "dizziness, mouth slimy, sharp, knife-like pain passed through right breast under the angle of scapula, worse on coughing, tickling in the larynx and upper part of the chest, causing a hacking cough, sputa yellow-greenish, putrid, dyspnea, poor appetite, constipation, sweat, urine dark red, etc." At 6 P. M., temp., 99⅘; pulse, 80; resp., 19.

On December 6th, temp., 99⅕; pulse, 78; resp., 19. ℞.: Merc. sol, 3x. Some of the symptoms relieved. At P. M., temp., 99⅘; pulse, 80; resp., 20; patient complaining of a constant burning sensation at one spot, at the angle of the right scapula; worse by breathing.

Dr. J. H. Thompson called this condition emphysema of skin, as stated by Oswald Vieroedt.* In fact, I read the following in that treatise under the heading of "Emphysema of Skin," is understood the entrance of air into the cellular tissue. It may be limited to one region of the body, as

* Da Costa's "Medical Diagnosis." Seventh edition, page 31.

* "Medical Diagnosis." Oswald Vieroedt, of Heidelberg, 1891, p. 55.

the neck or the upper part of the chest, or the upper part of the abdomen. But it may be spread over almost the whole of the body. It is a very rare condition; upon palpation we find that the part is very yielding, like a soft pillow. Quite unlike œdema, however, the depression made by pressure immediately disappears. Moreover, upon palpating the part, we feel and hear an unusually fine crackling. The so-called emphysema of skin from aspiration arises from the entrance of air, or gas, into the subcutaneous tissue, either from without, through a wound of the skin, or from within from an organ containing air, or gas; of much greater interest in themselves, as well as from a diagnostic point of view, is emphysema from air, or gas, entering the cellular tissue from within. Under all circumstances, it is occasioned by the rupture, either spontaneously or traumatically, of the wall of an organ containing air or gas.

Giving some of the causes, he says: "Cavities of lungs (after previous repeated adhesions between the pulmonary and parietal pleuræ) may ulcerate into the chest wall, until, finally, communication with the cellular tissue is established, then the pressure of a severe paroxysm of cough may cause the air in large quantity to spread out quickly under the skin.

"Wounds of the lungs (as fracture of the ribs without external wound) may either directly cause emphysema of skin, or, passing the mediastinum, as above, take the same course," etc.

From the perusal of this author's statement, my view seems quite justifiable and possible—in fact, quite right.

On December 7th, temp., pulse and resp. normal. ℞.: Ant. tart., 6x, which was continued till the 10th. Patient raised great deal of phlegm, and breathing became gradually clearer, the burning sensation at the angle of right scapula disappeared; he could lay on his back and have good rest and sleep.

On December 11th, ℞.: Ant. tart., 30x, ch. iii, one every four hours, which continued till the 13th. Patient doing very well in every respect; no medicine been given after this date, and finally, on December 21st, he was discharged, *cured*.

Diagnosis of Pregnancy by the Changes of the Urinary Phosphates.—Dr. S. W. Budd, in the *Virginia Medical Monthly* for March, 1890, says:

In all hyper-taxations of the cerebro-spinal system the elimination of the phosphates is increased. That this is true in pregnancy, Dr. William B. Gray (*Va. Med. Monthly*, March, 1887) has demonstrated by a careful analysis of the urine. In his original article referred to, he gave the results of the examination of fifty-four specimens of urine obtained from twenty-four patients. "Of these, the smallest amount of phosphates found was one-half grain to the drachm, though the increased secretion did not seem to be regularly progressive with the advance of gestation." * * * What most concerns the busy practitioner is the *microscopic appearance of these crystals*, for by it can be made the diagnosis of pregnancy weeks in advance of other signs of that condition. One should be thoroughly familiar with the details of the normal crystals before attempting to recognize any departure therefrom.

The *normal triple phosphate* is precipitated in those beautiful feathery crystals, sometimes a single leaflet, or in stellate forms; but, however seen, each feather is perfect. If only a fragment is served, the feathery appearance is preserved to its extreme tip, equally clear on each side of the central stem.

As soon as conception occurs, the appearance of the triple phosphate changes. It begins to lose its feathery appearance, and disintegrates. The change commences at its tip, and progresses toward its base; or only one side of the leaflet may be affected, leaving the other intact. As the disintegration progresses, only the bare stem may be left, with perhaps a few scraggy points jutting from its sides, and even these stems broken into bits with scarcely any mark to identify them as triple phosphates. These changes commence in the phosphates within twenty days after conception, and continue for several months. After the middle of the seventh month, Dr. Gray observes that these changes become less pronounced, and gradually approach a more normal type, up to the end of gestation.

Another important and useful fact, he records, is that, should the death of the fetus occur during gestation, the phosphates at once become normal.

The discovery of so simple and certain a method of diagnosing this condition deserves a better fate than to fall still-born on the professional ear. The evidence of the facts as recorded is unmistakable; and the diagnosis of pregnancy can be made without exciting the suspicion of the patient as to the object of the physician.

Among the first specimens of urine examined by the writer was one brought by a physician as a test. The changed appearance of the phosphates was characteristic and the diagnosis of pregnancy made. The physician then related that the urine was from a woman over forty years old, the keeper of a bawdy-house; that she had been a prostitute for twenty-five years, and had never been pregnant. On learning that her period was overdue some ten days, he asked her for a specimen of urine, which showed the pregnant phosphates. The diagnosis of her pregnancy was received with laughter and ridicule by the patient and her companions. The doctor, however, fixed the date of her confinement and left. His prediction was fulfilled within twenty-four hours of the time set for the labor.

After an experience of nearly three years examining many specimens for other physicians, "the diagnostic value of the phosphates in pregnancy" is confidently relied upon; and the profession owes Dr. Gray a debt of recognition for his discovery and painstaking investigation of this subject.

Scarlatina without Pyrexia.—Dr. Wertheimer mentions in the *Muench. Med. Wochenschrift* a case of scarlatina occurring in a child seven years of age, in whom, though the eruption was well marked, and the tonsils and tongue presented their characteristic appearance, there was absolutely no pyrexia either morning or evening, the highest point reached being 99.6° F. The pulse, however, was rapid, being from 116 to 120 during the first three days. There was no albuminuria; desquamation began on the ninth day. Dr. Wertheimer also mentions a second case occurring in a child of about the same age, where, though all the distinctive signs of scarlatina were present, the only time there was any abnormal temperature was the evening of the second day; then it was 100.6°. Here, too, there was marked rapidity of the pulse, and he suggests that this is probably an important sign in diagnosticating the rare cases of apyrexial scarlatina. His opinion is confirmed by Dr. Beetz, who immediately after the appearance of the article reported two other apyrexial cases where the pulse was also very rapid.

The New York Medical Times.

A MONTHLY JOURNAL

OF

MEDICINE, SURGERY, AND COLLATERAL SCIENCES.

EDITORS:

EGBERT GUERNSEY, M.D. ALFRED K. HILLS, M.D.

Business Communications should be addressed, "Publishers, 528 Fifth Ave.," and Checks, etc., made payable to THE NEW YORK MEDICAL TIMES.

Published on the First of each month.

OFFICE: 528 FIFTH AVENUE, NEW YORK.

NEW YORK, APRIL, 1892.

Changes of standing advertisements and communications in regard to that department, should be addressed to BENJ. LILLARD, Advertising Manager, 72 William Street, N. Y.

PAST, PRESENT AND FUTURE.

WE ENTER with this issue on the third decade of a journal which, during the twenty years of active, energetic life, has been devoted to the progress of the entire profession, irrespective of schools or of syndicates. Twenty years ago our journal came before the public as an independent medical newspaper, the only one at that time published in any country. The Old School journals, without a single exception, if any reference was made to the philosophy of the New School, it was made in a spirit of abuse, misrepresentation or contempt. The New School journals were equally abusive in dealing with the Old School, and confined themselves, whatever may have been the private practice of the editors, to the elucidation of their views of practice based upon the so-called law of *similia*. The earlier investigators and practitioners of the New School in this country never claimed that *similia* was the only rule of practice, that it was a dogma from which there was no exception, but simply that it opened a line of study thoroughly scientific, and promising richer returns in the prevention of disease and the relief of human suffering than any then known. The antagonism growing out, as an eloquent president of the New York Academy of Medicine said, of the dogmatism, unwise and unprofessional action of the Old School in expelling from its ranks men of acknowledged ability for simply investigating a principle in therapeutics which, if not new, had been but little understood, led to a schism in the medical profession bitter and relentless, in which the ethics of gentlemen and the legitimate deductions of scientific investigation were in a measure disregarded. The one party was fighting for that freedom of thought which is the very life of all progress, and the other, not from the standpoint of science, but to crush a hated rival which was daily gaining an immense *clientele*, more especially among the educated and thoughtful in the community. In the midst of this whirlwind of passion, when the lines were sharply drawn and the hand of school rested heavily upon all, this journal made its appearance, its columns open then, as they have been through all the twenty years of its life, to a full and fair elucidation of scientific thought irrespective of dogma or school. Believing fully that the New School had struck the keynote of a scientific therapeutics, we were willing to follow it only so far as experience and scientific investigation and the deductions based thereon pointed the way to successful work. We believed that a medical newspaper occupying marked and distinct sectarian grounds, while it might be of great value in bringing more distinctly before the public some great principles, still failed in that freedom and impartiality so essential in the development of truth and the progress of our profession. Colleges, hospitals and societies are useful in proportion to their judicial discrimination in giving each fact its proper bearing and utilizing it for good in the general work. It was to plead for the just rights of all and to open to the whole profession the information obtained and the work accomplished by scientists and practical workers in every field of intellectual labor linked with our own profession in the prevention of disease and the relief of human suffering, that this journal was established.

The line of work, carefully planned and patiently and persistently followed through all these twenty years, has not been without the bitter opposition and the malicious misrepresentation of extremists of both sides, but it is a matter of pride and gratification that the principles we have advocated with all our zeal and strength are now being accepted by the medical world in a broader liberality of thought and a greater unity of action. The teachings of progressive medical colleges are every day becoming more practical and more in unison as the revelations of science bring us closer and closer to the heart of nations. That the course of the TIMES has been in harmony with the progressive spirit of the profession is evidenced by the fact that on the commencement of its third decade its circulation has so far increased as to warrant a one-third reduction in its subscription price. The TIMES will hereafter be furnished to all subscribers at *two dollars a year!*

NATURE'S UNUSED FORCES.

IN a lecture given before the scientific society of Lehigh University, and recently published in this journal, we attempted to show, from past discoveries, that when man had learned to utilize the present untamed and unused forces of nature he would become the master of the world. The report of a lecture in the March *Nineteenth Century* by Mr. Gordon, given by Mr. Tesla, a young electrician, born near the border of Montenegro, and now living in this country, on the 3d of February, before the Royal Institution in London, goes far to show in his discussion of the relations between light and electricity and matter and motion how, step by step, the secrets of nature are becoming unfolded, and the possibility of utilizing, one after another, the forces, whose nature is disclosed, in the work of life.

"The tendency of modern science is to remove day by day the barriers between its different branches. Our views of the phenomena of light and heat, of electricity and magnetism, and even of matter and motion, are rapidly merging into one general theory of molecular physics, which is perhaps best expressed by the vortex theory of Sir William Thomson.

"According to this theory the whole of every part of space is filled with a fluid called ether, almost infinitely thin, and almost infinitely elastic. The historic experiments of Faraday, interpreted by the mathematical researches of Clerk Maxwell, have demonstrated almost beyond doubt that the same ether whose waves carry light and heat from the sun and stars to the earth, also carries the waves of electric and magnetic induction which follow each outburst of solar activity.

"Sir William Thomson holds that all that which we know as matter consists of vortices, or whirlpools, of this ether, which, from their rapid rotating motion, resist displacement, and, therefore, show the common properties of hardness and strength in the same way as a spinning top, or gyroscope, tends to keep its axis in a fixed direction. But whether the molecules, or particles, of what we know as matter are independent matter, or whether they are ether whirlpools, we know that they keep up an incessant hammering one on another, and thus on everything in space.

"Prof. Crookes has shown that the forces contained in this bombardment are immensely greater than any forces we have yet handled, many millions of horse power being contained in an ordinary room. Owing, however, to the forces being in every possible direction, they neutralize each other, and no result of them is perceivable to our senses; but if ever we discover how to so direct their courses as to send the majority of them in the same direction, we shall have at our disposal forces as much exceeding any we are now acquainted with as the blow struck by a bullet exceeds the force required to pull the trigger of a gun. In fact, as Mr. Tesla put it in his lecture, 'We shall then hook our machinery on to the machinery of Nature.' It is because they hold out to us a hope, however distant, of some day so guiding the ether storm, that the experiments of Nicola Tesla are of such transcendent interest and importance.

"Prof. Crookes, in his experiments on 'radiant matter,' has given us the first hint of a method of directing what, for want of more exact knowledge, we will call the molecules of matter. With the appliances at his command, however, he was unable to impart any great change of direction, but he succeeded in making that change manifest by reducing the disturbing forces acting against his directing force. In other words, he pumped out from glass bulbs and tubes nearly all the air or other gas that they contained, and the comparatively few particles left were then free to travel in any course imparted to them without much change caused by collision with others. This special direction was imparted by means of electricity, and gave us the beautiful phenomena of phosphorescence and radiant matter which are now so well known in these experiments.

"By means of suitably-shaped terminals a stream of molecules is focussed on a given point. If a piece of carbon or platinum is placed at that point it becomes white hot under the bombardment from identically the same cause which induces a sheet of flame to appear when a cannon shot strikes an iron target. If a ruby or other phosphorescent material is placed there it glows with its characteristic color, and if a little delicately-balanced vane or windmill is placed so that the stream is directed on one side of its fans, it rapidly revolves. The forces available in these experiments were, however, almost indefinitely small, being, as it were, merely flying spray from the great torrent into which we have not yet been able to penetrate.

"Now for the advances made by Tesla.

"In all the above experiments the electricity by which the directing force was imparted to the molecules was electricity of a comparatively slow alternation period, namely, electric currents oscillating about eighty to one hundred times per second. It was as if we had tried to ventilate a room by causing a man to walk slowly through it with an umbrella. He would undoubtedly

move the air, but would move it so slowly that ordinary methods would be insufficient to enable us to perceive its motion. In order to cause a rush of air we must put up a rapidly moving fan or other suitable machinery. Mr. Tesla, seeing this, abandoned the ordinary dynamo, which, as we have already noted, gives about eighty alternations per second, and the ordinary induction coil, which gives about the same number, and constructed a dynamo which gives 20,000 alternations per second, and by connecting this to suitable condensers he multiplied its alternations until they reached 1,000,000 or 1,500,000 per second.

"Then at once an entire set of new phenomena appeared, and the experimenter entered a region of mystery and hope. One of the first things noticed was that, either because these vibrations are too rapid to excite corresponding vibrations in the nerves of the body, or from some other cause, no shock is felt from the current; and that though an ordinary current at 2,000 volts will kill, yet this current at 50,000 volts can not be felt at all.

"It was also found that the vibrations keep time in some unknown way with the vibrations of solid matter. Vulcanite is one of the best insulators known, and will entirely stop any ordinary current or discharge, but the stream of sparks between two poles with this current pours through a thick sheet of vulcanite as easily or even with greater ease than through air. It does not perforate it in any way, but passes through it as light passes through glass.

"All the 'Crooke's' phenomena of radiant matter are almost indefinitely increased; it is the blow of mitrailleuse bullets compared to the blow of an air ball thrown against the wind. The forces can be directed for a considerable distance through space without the aid of wires. Electric lamps light easily when attached to one single wire and require no return conductor; and, more wonderful still, if metal plates are fixed on the roof and walls of a room and connected to the terminals, the whole atmosphere of that room, whether it be ether or whether it be particles of common matter, is thrown into a state of storm and agitation which can be at once made perceptible by bringing into the space tubes or globes from which the air has been partially exhausted. Such tubes, though without any metallic connections, yet glow and throb as if powerful currents of electricity were being sent through them from an ordinary induction coil.

"A 'Crookes' radiometer placed near a metal conductor from which neither spark nor glow is perceptible, yet rotates as if it were placed near a lamp or heated body, but rotates in the wrong direction, and a true flame burns in which nothing is consumed.

"When the discharge issues from a suitable terminal it has the appearance and roaring sound of a gas flame burning under too high a pressure, and gives off a considerable heat; to use Mr. Tesla's words again: 'This is not unexpected, as all the force and heat in the universe is due to the falling together of lifted weights, and the same result is produced whether these weights have been lifted apart by chemical energy, and rest in the form of oxygen and hydrogen ready to combine chemically, or in the form of energy of moving molecules directed by the electric current.'

"Should the application of Mr. Tesla's results ever fulfill the bold dreams of scientific imagination, we shall see a social and political change at least as important as that caused by the railway system or the electric telegraph.

"Most manual labor will become unnecessary, as unlimited power will be available at every man's hand. Engineering works will be able to be carried out on a far greater scale than has yet been even contemplated, and doubtless a corresponding era of material prosperity will set in; but, whether these dreams are ever fulfilled or not, few who attended Mr. Tesla's lectures will forget the possibilities which seemed to open to their minds when they saw a living man standing in the midst of the electric storm, receiving unharmed in his hand flashes of veritable lightning, and waving above his head a tube, through which the very life blood of creation pulsed in waves of purple fire."

THE OTHER SIDE.

"SYPHILIS To-day and Among the Ancients," in three volumes, now going through the press of F. A. Davis & Co., gives a well-defined historical statement from the earliest prehistoric times of which we have any record, down through the ages to the present time, of one of the most loathsome and disgusting vices and blood-tainting diseases of which we have any record. It is easy to notice in turning over the pages of these volumes how, as the human race has been sunk in ignorance and bestiality or evolved into higher planes of thought and life, those vices and crimes which were paraded shamelessly before the public in full noonday light hide themselves from public view and are indulged in more or less secretly. Educated public opinion, which is every day gathering force in the right direction as it is being more and more evolved above the brute

creation, puts its stamp upon vice and crime. The progress is, of course, slow, but enlightened legislation keeps pace with that progress, and must in an enlightened community keep pace with public opinion. Just as fast as the public sentiment is educated up to the purer, higher standard, just so fast and no faster will that standard be elevated in our midst. In the meantime we must take society not as it will be in the process of evolution in the future, but what it is now in its imperfect state with the hot blood and, to a certain extent, untamed passions of its animal progenitors vibrating through its body, and while we recognize some forms of vice as the outgrowth of physical and mental conditions keep them so far under surveillance as to protect society in the best possible manner. When the father and mother, the pulpit and the press have done their full duty, there will be but little need of legislative enactments. The arraignment of Rev. Dr. Parkhurst of the city government, in his two noted sermons recently delivered, for the vice and crime in our midst, has been scattered by the city press broadcast over the land, and has created more or less discussion. It is a graphic picture of the great metropolitan city and its government as seen by the pulpit. It is no more than fair that by the side of this picture should be placed one drawn by one of the keenest and most clear-sighted members of the city government, who speaks from the experience and knowledge gained by the daily contact with the vice and crime of the city for almost a lifetime. Inspector Williams has won for himself a name as one of the ablest and most fearless members of the police department of this or any other city in the world, and when questioned as to the conditions to which Dr. Parkhurst refers, says:

"The efficiency of the police force of New York in maintaining order and driving crime to hidden places is clearly apparent. Especially is this evident to those who lived in New York ten or twenty years ago and can compare all the conditions of that time and this. Burglaries and assaults on the streets were so common then that the newspapers daily chronicled numbers of them. Now a burglary is a rare exception, and practically none of any magnitude occur. Robberies and assaults are confined almost exclusively to those who go into the lowest class of liquor stores at night, drink promiscuously, and display a roll of bills. It is not strange they are followed by ruffians. This city is the refuge of the criminals of the world. It is only the worst ones who are driven from European capitals. They flock here, and yet crime is more thoroughly suppressed than in any other city in the world.

"The man or woman who goes on the street to be solicited will probably be accommodated. But it is a fact that a sober man or woman can walk through any streets of New York at any hour of the night, and, attending to business, neither be insulted nor assaulted. There is one class of men who will speak to a woman alone. They are patrolmen. They will warn her to seek her home as quickly as possible, and will follow her for protection until she leaves the beat.

"Of course, there are disorderly houses, but they are more hidden, and less of that vice is flaunted than in any other city in the world. Such places have existed since the world began, and men of observation know that this fact is a safeguard around their homes and daughters. Men of candid judgment, religious men, know, too, that they had ten thousand times rather have their live, robust boys err in this indulgence, than think of them in the places of those unfortunates on the island whose hands are muffled or tied behind them. This is a desperately practical question with more than a theoretical and sentimental side. It ought to be talked about and better understood among fathers.

"Thank God that vice is so hidden that Dr. Parkhurst has to get detectives to find disorderly houses, and that thousands of wives and daughters do not know of even their existence. Such horrible disclosures as were made before innocent women and girls in Dr. Parkhurst's audience do vastly more harm in arousing their curiosity and polluting their minds than a host of sin that is compelled to hide its head. When I was captain of the twenty-ninth precinct I went with Dr. Talmage on his errand for sensational information for his sermons. I know, from observation and from reports which I was careful to gather, that never in their history were the places he described so thronged by patrons, largely from Brooklyn, or so much money spent there for debauchery as after those sermons.

"See how these disorderly houses have been driven about in New York. What is gained? Time was when along the rear wall of Trinity Church all was corruption. Then the district about the old New York Hospital became a refuge. They were driven into the vicinity of Greene and Mercer streets and then further uptown. Now when we arrest a woman on the Bowery or Sixth avenue for soliciting the chances are that she will give a flat in Harlem as her residence. This is scattering the infection all over the city. I believe thoroughly in localizing this

evil and then rigidly prohibiting, as can easily be done, any unseemly conduct out of that district. Scatter it over the city, and then nothing is gained and everything lost in attempting regulation. There are 30,000 strangers in New York every night. They will go where they want to. There will be places for them. The evil will exist. Nothing else than regulation is possible in this world as it is."

OLD AGE AND MORTALITY.

ONE OF the most important and interesting of the addresses delivered on the 1st of October last (says the *Med. Press and Circular*) is that given before the students of the Leeds School of Medicine by Sir James Crichton Browne, and the subject of which is "Old Age." In this the author dwells on the well-recognized fact that in recent years the general death rate of Great Britain has undergone a remarkable reduction; but he points out the less well-known truth that such diminution is mainly among the younger parts of the population, and that there is actually very small improvement seen in the mortality returns that relate to persons over fifty-five years old. Thus, since the year 1859 the death rate has declined 17.6 per cent. at all ages below fifty-five, whereas at the ages exceeding this the reduction amounts to only 2.7 per cent. Striking as these figures are, however, it is yet more significant that, at the ages from sixty-five to seventy-five the death rate exhibits an increase, so that the duration of old age is slowly but surely being shortened; and Sir James Crichton Browne finds very little compensation for this fact in the undoubted preservation of infantile and juvenile existence that is unquestionably being effected at the present time. For the cause of the increasing mortality among the adult and mature members of the population, we are told to look in the classified statistical death returns, wherein it is clearly shown that certain diseases of older years are acquiring a regularly increasing influence in swelling the number of deaths annually registered.

Thus it is that cancer, nervous diseases, heart affections, renal disease and the degenerations generally, are adding in steadily growing proportions to the mortality, the increase being a most perceptible and uncompromising factor of registration. The possibility that these effects may be explained on the ground of increased accuracy in diagnosis is considered in the address, and is rejected on the ground that the increase due to the diseases in question exceeds the decrease of mortality from all other causes. It is also pointed out that the degenerative diseases answerable for the larger mortality now recorded, have their origin in the conditions under which the competition for existence compels life to be carried on in the present day; that their incidence is felt by tissues weakened by senility, a premature senility induced by the improper conditions of living; and that the evidence in favor of the improved chances of longevity enjoyed by country residents as compared with the denizens of towns afforded ample proof of the position here taken up. That there is no necessary connection between old age and the degenerations alluded to above, is evidenced by the fact that instances are by no means uncommon, in which at even very advanced years, the faculties of mind, associated with youth and adult age, and physical perfections such as sound teeth, erect figure, muscular activity and nervous tone are presented in well-preserved individuals of both sexes.

In a perfectly natural state of things each member of the community would pass through the various stages of healthy life, as is done now by the most fortunate of their kind; and the average duration of existence when unaffected by accident or hereditary predisposition would then be the same for all. Our present habits of life, however, go far to interfere with the natural development of the best qualities of the mind, and coincidently with life's full fruition. Sir James Crichton Browne, indeed, regards the natural life of man as extending to one hundred years, and that any falling short of this is a curtailment of its natural length; and his advice to medical students is to start their career with this idea firmly engrafted on their minds, and to rest dissatisfied until, both for themselves and their patients, they have succeeded in making it the usual term of existence. It would be idle to deny that the advantages following from the delivery of such an address as that which is briefly referred to above, are less immediately apparent than might perhaps be desired; but that they are really productive of good may be accepted as positively true. To each one who heard the address in question, it will necessarily occur to reflect on the facts to which it directs attention; and with the experience gained with increasing knowledge of the processes of disease, it will surely happen that the principles enunciated in the lecture will illuminate the difficulties, which but for the assistance of some such aid would remain insurmountable. The philosophical study of medicine, the method of regarding the factors of disease less as so many hard and dry details that arise as natural consequences of a certain aggregation of circumstances, than

as the outcome of a definite interference with the laws of life, is what it is desired to see the modern student of medicine make the object of his endeavors; and the more fully he is taught to grasp the idea of evolution as the ruling factor in nature, diseased as well as normal, the more certain will be his progress along the path that leads to fullest knowledge.

THE REST CURE.

BEFORE the New York Neurological Society, March 1, 1892, Dr. Warton Sinkler, of Philadelphia, read a paper on the rest cure as conceived and elaborated by Dr. Weir Mitchell. The integral parts of this plan consist in isolation, rest in bed for a number of weeks, massage, overfeeding, the use of general galvano-faradism, together with an absence of all mental or physical activity on the part of the patient. The treatment, Dr. Sinkler said, proved efficacious in cases of neurasthenia, hysteria, migraine, Pott's disease, in all uterine disorders dependent upon congestion or in which congestions aggravated existing genital abnormities, and in the various insanities due to exhaustion. In the discussion which followed, Dr. Allen Starr praised the Weir Mitchell treatment, acknowledging its efficacy and recognizing its unmistakable curative effects. At the same time, he thought these were largely due to hypnotic suggestion. Thoroughly radical betterment took place only in Philadelphia as a rule. Because it was difficult and distant, the patient in about ten days—and the patient's family as well—could be raised to the highest state of expectation by a course of judicious lectures from the physician in charge. The woman went to Philadelphia expecting to get well. The family also expected it; and the environment being everything that could be desired, the expected arrived. While admitting that neurasthenia and hysteria might be greatly improved by isolation, rest in bed, over-feeding, etc., Dr. Barney Sachs thought one class of women, often erroneously called hysterical, must of necessity be harmed, possibly beyond redemption, by such a secluded and introspective plan. He referred to hypochondriacs, the so-called hysterics who fail to recover by any such isolation or self-centered method.

One of the dangers of the treatment Dr. George Jacobi considered to be an hereditary tendency to obesity, citing an instance where the rest cure had resulted in an abnormal deposit of fat. At his advice the cure had been undertaken, and for the result he had unfortunately been held responsible. The inability to get patients to carry out this treatment in New York, was somewhat lamented by Dr. Landon Carter Gray, who, in the main, seemed averse to isolation and rest in bed for cases of melancholia in particular, and to massage in general. Depression of spirits, he thought, was increased by the solitude of a patient with one attendant. Mechanical massage (Ling's Swedish movements as applied by Dr. Charles Fayette Taylor's apparatus) used at Bloomingdale, Dr. Lyon thought of great value among the insane, the personal element being entirely eliminated, and most of the advantages of manual massage being retained. The rest cure for floating kidney was advocated by Dr. Leonard Weber, who cited a case greatly benefited by it. In the opinion of most of the speakers, the modified form of rest cure seemed best adapted to the majority of cases in which this plan of treatment is indicated.

RECENT RECORDS OF HYSTERIA.

SINCE Debove established conclusively the existence of toxic hysteria, symptomatic forms of hysteria are being more and more frequently recorded, with the result of proving the extremely rare occurrence of the essential and classic type of this particular neurosis. All kinds of alcoholism induce hysteria. Especially is absinthe drinking a potent factor in its evolution, a fact noted in the bibliographic review of the *Gazette Médicale de Paris*, February 13, 1892, that also contains several interesting abstracts upon various hysterical manifestations and anomalies. A thesis that the journal refers to is by Dr. Nevue-Dérotrie and treats of hysteria consecutive to morphinism. Like other intoxicating agents, morphine can rekindle or start anew in predisposed subjects the syndrome of hysteria, and these phenomena may be mistaken for symptoms of morphine poisoning. They also reappear after the morphine habit is broken up, and may be allowed to pass without special treatment unless distinctly recognized. Hysteria due to morphiaism is amenable to treatment, especially such cases wherein the drug is abruptly suppressed and hypnotic suggestion made use of. There is special danger in giving morphine to hysterical patients; first, because their nervous symptoms are aggravated by it, and, secondly, because they readily become addicted to morphinomania.

The poison of grip has been a potent cause of hysteria during the recent epidemics. This neurosis may develop at any period of the infectious disease, but is more likely to appear during con-

valescence. There may be isolated symptoms or the classic syndrome quite complete. Recovery takes place through the agency of appropriate measures directed to the general condition.

Hysterical œdema is the subject of Dr. Trintignan's thesis, and is a condition due to vaso-motor and trophic disturbances of purely nervous origin. This œdema is hard, bluish or reddish in color, and frequently confounded with rheumatic or phlegmonous disease. From these it is readily distinguished by the tint, absence of pus or serous fluid, by subnormal temperature, and the sudden onset and disappearance. Often it is preceded or followed by paresis, paralysis, or contracture, and develops only in predisposed subjects presenting hysterical stigmata.

That hysteria can simulate every other disease has long been known, and many cases of apparent locomotor ataxia, caries of the vertebræ, disseminated sclerosis, etc., are now on record. Recently Dr. Poirier has written of the hysterical syndrome masked as cervical hyperthropic meningitis. His observations are particularly interesting, especially in regard to the purely functional character of symptoms simulating organic disease. The painful period was shorter than in true hypertrophic meningitis; and during the stage of deformity, the lesions were more upon one side than the other. A correct diagnosis was made upon the following clinical facts: rapidity of onset and general course of the disease, together with the presence of hysterical stigmata (hemianæsthesia, abolition of laryngeal reflex, restriction of the field of vision, etc.).

A little over a year ago, Dr. Berillon, the editor of the *Révue de l'hypnotismen*, in a pamphlet on the indications for hypnotic suggestion, declares that this particular form of mental therapeusis is indicated in the local and general manifestations of hysteria, and in mental troubles of a hysterical nature. According to this authority, the mental state of hysterical subjects has not received sufficient attention. The psychic aspect may vary from simple mental instability, absence of volitionary power, and the presence of a spirit of contradiction, to that of actual delusions and maniacal excitement. Against this "moral ataxia" which shows itself by alternate hyperexcitability and depression, drugs alone can do but little. The remedy must be in the nature of psychic aid, and Berillon thinks the ideal psychic remedy exists in hypnotic suggestion. Whatever methods of procedure are adopted, hysterical patients must never be left to themselves. Here the do-nothing plan is attended with harrowing and disastrous results. Without other guide than their own disordered minds, these unfortunates drift further and further away from mental equilibrium. They must be guided and helped to resist the morbid impulses that assail them. This treatment of symptoms causes to disappear the syndrome that made possible the diagnosis of hysteria.

SALT BATHS IN PHTHISIS.

THE advantages of hydro-therapy are every day becoming more thoroughly recognized and appreciated. The use of water in fevers, in various forms of nervous disease and mental troubles, no longer needs défense. Baths in pulmonary phthisis constitute as yet something of a novelty; and the experiments of a Russian physician, Dr. Belicheff, in Tchondmonsky's clinical laboratory (Wratch, No. 39, 1891), present for this reason aspects of peculiar interest. Ten patients in various stages of pulmonary phthisis were selected and careful records made of temperature, pulse rate, number of respirations, blood pressure (pneumonmetric), lung capacity, inspiratory and expiratory power (dynamometric), muscular strength, morning and evening bodily weight, appetite, expectoration, cutano-pulmonary waste, and cutaneous sensibility. The food was the usual hospital fare. Each experiment lasted twelve days, divided into three periods of four days each. During the first four days, careful records and tests were noted before any baths were given. Then followed a period of four days, during which each patient had a daily bath lasting half an hour, in water heated to one hundred degrees and containing one part of salt to every hundred parts of water. Records and tests were also kept during the bath period, and the four days following. The conclusions reached by the twelve days' experiment are these:

I. During the bath period and the four days following, morning temperature is slightly elevated. Vesperal temperature is unchanged during the period of baths, and is slightly elevated during the post thermal period. Immediately after the bath proper, there is a fall in temperature.

II. Pulse rate is diminished during the bath period. In the third period, it is slightly accelerated.

III. Blood pressure is raised in the second and third periods.

IV. Pulmonary capacity is augmented, especially so the days following the bath period.

V. The power of inspiration and expiration increases with the increase of pulmonary capacity

VI. Muscular force in the hands is increased.

VII. There is a gain in morning and evening bodily weight during the bath period, and a gain also during the post thermal period, though less pronounced.

VIII. Appetite improves during the bath period.

IX. Daily expectoration is lessened.

X. Cutano-pulmonary waste is increased.

XI. Cutaneous sensibility is increased.

XII. There is improvement in the general condition, and sleep is calmer and more profound.

THE KEELEY CURE.

THERE is no doubt that the "Keeley Cure" has been to a certain extent successful in breaking up the taste for alcoholic stimulants and restoring the drunkard to his normal condition, but the fact that we are repeatedly called to notice the sudden death, either by insanity or the sudden giving way of vital power, of some of those who have been under this treatment, has led to the conviction that the treatment is not in all cases safe and is more or less attended with danger. Dr. Thomas S. Robertson, of this city, a prominent and much respected physician, who has made a specialty of nervous diseases, after closely watching the action of the Keeley hyperdermic injections on the brain and nervous system, has prepared a remedy, the secret of the formula of which he retains, which, he says, is efficient in its work and positively without danger. Dr. Robertson says, after repeated experiments: "I prepared a compound that never had been used, to my knowledge, by any physician in this or any other country, and I will substantiate that statement by saying that I have been over the literature of the subject in French, German and English, and have found no compound like it—no formula like it. I have used it already in over fifty cases, and so far there has not been a mishap. There has been no depression. The treatment has been a tonic from beginning to end.

"I recognize alcoholism as a disease, and the result of the disease is the craving for alcohol or a craving for something that will alleviate the distress. I began by administering the injection three times a day. Keeley uses four injections a day. I reduced it to twice a day and found that the same benefit could be derived from injecting night and morning as four times a day."

Rooms have been opened for the treatment, under the care of Dr. Arnold, at 34 West 15th Street, to whom alone Dr. Robertson has communicated his secret. Possibly in the near future the secret may be given to the public, and in the meantime Dr. Robertson's high standing in the profession will give to the treatment a certain amount of public confidence.

DR. JOHN B. ROBERTS, President of the Philadelphia County Medical Society, recommended, in his inaugural address, that "the membership of the society be thrown open to all educated medical men regardless of school," to which sentiment we say, Amen!

We hope that this proposition is made in sincerity, and that the details will be worked out upon just and equitable principles, for it is useless to attempt to accomplish anything upon any other grounds.

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The following plea for professional toleration is sent to the *Clinique* by Dr. Wm. C. Wood, who says, although an Old School practitioner:

"I would say that I desire most earnestly the day when all the various schools will meet on equal terms, each remembering that to no one man, or set of men, is it given to have a monopoly of truth. I find from experience that both are to blame, there being as much illiberality and bigotry in one school as the other. And my personal experience is that, upon closer acquaintance, each will find enough good in the other to justify a breaking down of the barriers.

"For my part, I would ask the homœopathist to surrender nothing, nor am I willing to, but simply ask that each recognize the fact that difference in dose produces difference in action and therapeutic effect. That, with a thorough knowledge of his drug, the prescriber is justified in making use of either the similar or dissimilar action of his remedy, and I *know* that cures result from both practices.

"I have not hesitated to defend the rule of similars in my county society, nor, at the same time, have I felt the inclination or necessity of surrendering the older method because I sometimes adopt the new. In my medicine case there are as many dilutions as tinctures and fluid extracts, and they are distributed impartially among my patients, according to my judgment concerning the case in hand and the results desired.

"I have grounds for complaint of the 'allopath' who decries homœopathy and secretly uses a trituration of mercury, who announces discoveries (?) of new therapeutic effects stolen from Hughes or Guernsey; and still greater grounds for complaining of a homœopathist who preaches dilutions and high potencies, decries the Old School physicians as poisoners and butchers, and then fills up his own pocket case with mother

tinctures and carries his hypodermic syringe and cathartic pills.

"Now, I have met just such allopathists and just such homœopathists, on the one hand, and, on the other, number among my personal friends many high-minded scientific physicians of both schools, who give credit freely where credit is due, and scorn to descend to criticism of each other's practices, seeking only for truth and the good of the sick."

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The American Institute of Homœopathy has resolved for *peace*, while the American Medical Association has decided to admit to membership all candidates who decline sectarian designation. Thus it will be seen that the representative bodies of the respective schools are modifying their positions and coming nearer together. What now stands in the way of medical union? Simply, a narrow view of what constitutes self-respect and a lack of confidence in each other.

THE INITIATIVE.—Napoleon was considered pretty good authority upon matters military (says the *Times and Register*), and he always insisted upon the importance of taking the initiative. There are many occasions on which the physician must show his generalship by acting upon this maxim. An accident occurs, and half a dozen medical men rush to the spot. One throws off his coat, opens his case, and goes to work at the victim, while the others help or look on. A woman is undergoing the pangs of maternity, and her groans begin to make the spectators uneasy. The doctor sits quiet, saying little, doing less. One begins to suggest this, another to recommend that; and finally the doctor is flatly ordered to "do something, or send for a man who will."

A more skillful manager does the suggesting himself. He sends the most uneasy person present after chloroform, another for brandy; others see to the hot water, the baby clothes, the binder, the granny pins, the disinfectant solutions, etc., etc. He comforts the sufferer, holds her back, gets the nurse to give her hand to the patient to pull during pains, or fastens a sheet to the bedpost for the same purpose. In a word, he busies himself, and finds something for every individual to do. May be he doesn't know the presentation and couldn't describe the Veit-Smellie method to save his neck; but the people are all satisfied to have some one take the authority, and the new mother says, "Oh, doctor, you helped me so much! I'll never forget your kindness." And she never will.

Take the initiative!

Never mind whether you are the best or not. Assume that you are until some one proves himself the better. Nineteen times out of twenty, the crowd coincides with the first man who gets up and tells them what they all think.

THE SULPHANILIC ACID TEST IN THE DIAGNOSIS OF TYPHOID FEVER.—The test, known for a number of years as Ehrlich's test, has till recently been regarded by many rather as a medical curiosity than as of diagnostic value. Dr. C. E. Simon, of the Johns Hopkins Hospital, has recently shown that by carefully following the precise directions for its use, valuable information may be derived. The test consists of two solutions: (1) A saturated solution of sulphanilic acid in five per cent. hydrochloric acid, and (2) a five per cent. solution of sodium nitrate. These are to be mixed, just before use, in the proportion of forty C. C. of (1) to one C. C. of (2). If this mixture be added to urine from a case of typhoid fever, the further addition of ammonia will produce a play of colors varying from an eosin-rose to a deep garnet-red. The best method of applying the test is to take a few centimeters of urine in a test-tube, adding an equal quantity of the sulphanilic acid mixture, and shaking thoroughly; one C. C. of ammonia is then run carefully down the side of the tube. At the junction of the two liquids there will be observed a ring of the characteristic color, which is produced in scarcely any other disease than typhoid fever. Dr. Simon's conclusions may be thus summarized: (1) The reaction may be obtained in typhoid fever from the fifth to the twenty-second day of the disease. (2) Its absence from the fifth to the ninth day indicates a very mild attack, save in children, though this rule is not an absolute one. (3) As it occurs previous to the rash, it is a very useful aid in the diagnosis of typhoid fever.

SULPHURING OR BLEACHING DRIED FRUIT.—Dr. Joel W. Smith (*Trans. Am. Public Health Association*) points out the dangers of the process.

It is about fifteen years since the sulphuring or bleaching dried fruit began. At first only the uniform light color was sought, as in apples, pears, etc., but for some years past nearly all of the large evaporating establishments have "sulphured" all kinds of fruits and some vegetables, and now much of the California sun-dried fruit for market is also treated in the same manner. The light color, especially of apples, early attracted

attention, thus materially increasing the price of such fruit. Fruit so treated is said to dry more readily. While the apparent change is only in color there is a loss of the natural fruit flavor, even by the most careful sulphuring.

The bleaching process is the result of the action of sulphurous acid.

Investigations have proved the presence of sulphate of zinc in all samples of fruit where zinc-surfaced trays were used to hold the sulphured fruit while drying.

The advantages claimed are that sulphured fruit dries quicker, looks better, keeps better and sells better. It makes ripe, unripe and poor fruit look alike. The slightly yellowish-brown color of unbleached dried fruit is an evidence of ripeness, good quality and proper drying. The more rapid the drying the lighter will be the color, and the fruit will keep well if at once properly excluded from the air.

IT IS not generally known that the camphor tree, one of the most beautiful shade trees in the world, will flourish in almost any climate where the temperature does not go below 20 F. The soil and climate of Florida and the Gulf States are peculiarly adapted to the cultivation of the camphor tree. The trees are grown from seed which have been quite largely distributed from the United States Department of Agriculture for nearly thirty years. Twelve months ago not less than five thousand plants were sent out from the Department of Agriculture at Washington, and many thousands of plants are now growing there from seeds sown six months ago.

A BILL has been introduced into the legislature, at Albany, by Senator Smith, to prohibit all disposition of the human body except by burial. Of course, there is no prospect of any such bill becoming a law, and those hereafter who wish to have their bodies cremated after death will be gratified. If the neighborhood of the city of New York goes on increasing in population for the next one hundred years in the same ratio or even less than during the last, there will be in the city in the year 2000 a population of at least 40,000,000, and some other plan will have to be devised of disposing of the dead than that which now prevails. A partial solution of the question is now contemplated and rendered possible by the fact that the passage of a current of pure dry air for a certain length of time over the dead body, so removes the moisture as to render the tissues impervious to decay. The bodies preserved for all time can be placed in niches by the thousands, in vast mausoleums above ground, of beautiful architectural construction, until, perhaps, as the centuries roll past they may be taken from their long resting place, as the mummies of the ancient Egyptians are to-day, and used as fertilizers for the fields, their particles thus re-entering the world of life and use when all sentiment connected with their former life has been forgotten in the darkness of the past. This kind of legislation may be classed as poetical and sentimental legislation to light up the more arduous duties of senatorial life.

HOME HEATING.—In the *International Jour. of Surgery*, October, 1891, "a family man," having "no interest in heating, except the interest of any decent man for a decent way of doing things," discusses the above subject. From his own experience, he concludes that the methods of house warming, "reckoned on the standard of quality and economy, run in about the following order: hot water, steam, stoves, furnaces, fireplaces." Hot water warmth, properly constructed, he believes to be the most economical and healthiest and most convenient method of producing artificial indoor warmth. He uses, as less expensive, the direct system, which consists of having radiators in the rooms, the radiators being fed directly with the hot water, coming from the hot water boiler. One of the cheapest and best methods of ventilation he knows of, is to have an opening near the baseboard, opening directly into the flue, or some other outlet, especially constructed for it, with hot water or steam pipes in this opening. The pipes need not necessarily be near the room, but should be located not more than half-way between the opening and the outlet. A moderate degree of heat in these pipes will create a draft, and draw off the bad air of the rooms. Only a few of these pipes are necessary, and the amount of hot water or steam required to heat them is too small to be worthy of consideration.

THE SENSE OF TASTE IN THE LARYNX.—For many years (*Brit. Med. Journ.*) it has been known to histologists that the specific end-organs of taste, namely, the taste-bulbs, occur on the posterior or inner surface of the epiglottis, but up till now the physiological proof of the existence of the sense of taste in the epiglottis has not been forthcoming. Michelson, under Langendorff's direction, made a number of experiments, which show that the inner surface of the epiglottis is endowed with taste. A Schrœtter's laryngeal sound, tipped with a solution of quinine or saccharin, was introduced into the larynx, and the

drop of the sapid substance was cautiously brought into contact with the inner surface of the epiglottis. Positive results were obtained, which were controlled by the sensation—electrical taste—known to be produced by electrical stimulation. It seems, therefore, proved that a part of the nerve fibers passing to the larynx are nerves of taste.

IN A recent article on meteorological phenomena, in their relation to certain questions now much discussed, a California writer argues that the amount of moisture in the atmosphere is much greater than is generally supposed, its capacity for sustaining moisture depending mainly upon its temperature; thus, the atmosphere at 100° Fahrenheit at the earth's surface is capable of sustaining, in an invisible form, moisture to one-fifteenth of its weight, or an equivalent of one pound of water to every inch of area—it being thus readily seen what an immense volume of water may possibly be discharged over any given area when the atmosphere and electric conditions are favorable for its sudden condensation, as in the case of what are called cloud bursts. Of the latter, this writer remarks, in explanation, that warm currents of air, highly charged with moisture, are frequently wafted by winds over mountains, where they meet with a cold atmosphere or a cold current, which suddenly forms dense black clouds, that sometimes drop their moisture in prodigious cataracts of rain—"cloud bursts," as they are usually termed.

AMONG the traditions of agricultural life is one that several kinds of plants, among them the "*loco weed*," produce insanity in animals who feed on them. The investigations of the Kansas State Board of Agriculture show the tradition to be entirely without foundation. Mr. Sayre, the chemist of the Kansas Board of Agriculture, has extracted the alkaloid from all these so-called lunacy plants and taken it in large quantities without producing the least unpleasant effect. Thus science is, step by step, clearing away the rubbish of immature and careless speculation.

PROF. HORATIO C. WOOD was placed in a false position by the daily press reports of his testimony as an expert on opium-poisoning in the Harris case. The account was entirely fictitious, and not at all what Prof. Wood testified, and shows what little confidence can be placed in such reports.

Prof. Wood's statement was as follows: "The positive diagnosis of opium-poisoning from the symptoms alone is often impossible. In the Harris case the symptoms, as embodied in the hypothetical question, were so loosely observed that many symptoms essential to the diagnosis are omitted, and to this is added the fact that the early development of complete coma, as recorded, is conformable to natural diseases, and is extremely rare, if it ever be present, in opium-poisoning. It seems to me that the cause of death, so far as medical testimony is concerned, is enshrouded in an impenetrable mystery."

BIBLIOGRAPHICAL.

SEVENTH ANNUAL REPORT OF THE NEW YORK POST-GRADUATE HOSPITAL (AND THE BABIES' WARDS) FOR THE YEAR ENDING SEPTEMBER 15, 1891. No. 226 East 20th Street, New York City.

The Directors of the Post-Graduate Hospital and Babies' Wards, in presenting their annual report, inform their friends and the public that more patients have been under their care than in any year since the establishment of these institutions: 842 house patients have been treated; of these 286 were babies and 556 adults; 13,007 patients have been treated in the dispensary, where 43,791 visits have been made.

The directors earnestly appeal to the people of New York in behalf of this great charity. Babies, children, women and men here receive skilled medical and surgical care, and a large class of practitioners of medicine, by watching the details of this treatment, are made much more competent for their work.

Seven years ago the Directors of the New York Post-Graduate Hospital, assisted by several charitable ladies, established a babies' ward. This institution, the first in the City of New York to provide especial care, by themselves, for infants, is now enlarged to such an extent that the whole house adjacent to the Post-Graduate Hospital is used for its purposes. Many of the beds in the babies' wards are endowed; if this were done for all of them, much more good would be accomplished.

The work of these wards is conducted on a broad basis, having a three-fold object:

First.—The proper medical and surgical care of the little waifs who are sent from all parts of the city for treatment. Among the many hospitals and charities of New York, there has been almost no provision made for the care of sick and needy infants. The general hospitals decline to receive them, and many lives are sacrificed because poor women in tenement houses are so frequently unable to give their infants suitable nourishment and medical treatment during illness. The wards were kept open throughout the whole of the past summer, and during July and August a number of infants were sent to the "Convalescent Home," at Summit, N. J. Tickets of admission were distributed among the summer corps of physicians of the Board of Health and of the Childrens' Aid Society. This has involved a large outlay on the part of the hospital, but it is believed that much good was thereby accomplished. No cases, except contagious diseases, are refused, save for want of room. Admission can be had at any hour of the day or night.

Second.—The wards are utilized for the higher education of physicians in this important and neglected branch. During the past year between four and five hundred physicians, from all parts of the United States and Canada, have taken courses at the New York Post-Graduate Medical School; they have been here enabled to watch all the

phases of infantile disease, and learn the newest methods of treatment. These wards are thus helping to treat sick infants in many sparsely settled regions of the South and West.

Third.—The nurses from the Post-Graduate Training School are given special training in the care of sick infants which will enable them to do useful service in this special branch after graduation.

Particular attention is called to the orthopædic ward for children. Perhaps the effect of surgical treatment and good nursing are never better seen than in such a ward as this.

The woman's ward is also one worthy of special consideration; the most serious surgical operations are here performed by eminent surgeons. Facilities for treating poor women in the City of New York, for serious surgical diseases, are still very limited; much more ought to be done than is done. They have but one endowed bed in the woman's ward; but ought to have many more, for many patients are not even able to pay the small sum necessary for their board, which is fixed at a nominal price. The directors repeat their urgent desire to endow every bed in their hospital, so that none but actually poor people may be treated here. It may be convenient for people with limited means to be treated in a hospital, but the most deserving class are really those who have nothing, who can not even pay the cost of feeding them, who are literally in the highways and hedges of life.

The directors find their buildings so inadequate for their rapidly increasing work, that if sufficient encouragement be given, they intend to greatly improve and enlarge their facilities at a very early date, and they earnestly appeal to the citizens of New York for aid to carry on their hospital in a proper manner.

The medical officers of this institution have been selected from the very front rank of the profession and have the fullest confidence of the community.

THE MEDITERRANEAN SHORES OF AMERICA: or, The Climatic, Physical and Meteorological Conditions of Southern California. By P. C. Remondino, M. D., Member of the American Medical Association, of the American Public Health Association, of the State Board of Health of California; Vice-President of the California State Medical Society, and of the Southern California Medical Society. Illustrated with Forty-five Engravings and Two Double-page Maps. In one handsome, Royal Octavo Volume, 176 pages. Extra Cloth, price, $1.25, net; cheaper edition, Bound in Paper, price, 75 cents, net. Philadelphia: The F. A. Davis Co., Publishers, 1,231 Filbert Street.

This is the first of a series of publications proposed by the F. A. Davis Co. on the "*Therapeutics of Climate.*" The author classifies the climate of Southern California under six distinct heads:

1. A purely insular climate.
2. The peninsula climate.
3. The coast climate.
4. The joint hill and valley climate 200 to 2,500 feet elevation.
5. The mountain climate 2,500 to 9,000 feet elevation.
6. The desert climate from 600 feet below sea level to 2,500 feet elevation.

Of these, the three first are essentially marine climates, the fourth is partly marine in its effects and influence, and the fifth and sixth are land climates. None of the climates can be called humid, as the same dryness and asceptic condition of the atmosphere prevails in all of them. The great variety of climates of Southern California, the author thinks, meets almost every condition. A careful description of every part of Southern California is given from a health standpoint, the text illustrated with maps and pictures of some of the leading health resorts.

A DICTIONARY OF TREATMENT OR THERAPEUTIC INDEX, INCLUDING MEDICAL AND SURGICAL THERAPEUTICS. By William Whitea, M. D. Revised and Adapted to the Pharmacopœia of the United States. Philadelphia: Lea Brothers & Co., 1892.

The work is entirely one of therapeutics and contains an immense amount of valuable information presented in a condensed but an intelligent form. The diseases are taken up alphabetically, so that the reader can readily find any desired subject. Physicians of all schools can find something of practical value in the intelligent *résumé* of treatment.

In the treatment of diabetes, the very simple method of Sir W. Roberts of ascertaining the amount of sugar excreted is given in Sir William's words: "About four ounces of the saccharine urine are put into a twelve ounce bottle and about the size of a small walnut of compressed yeast is added to it. The bottle is then covered with a nicked cork (which permits the escape of carbonic acid) and set aside in a warm place for about twenty-four hours to ferment. Beside it is placed a tightly corked four ounce bottle. Two or three hours before the specific gravity is taken, both vials should be removed to a cool place. The difference between the specific gravity of the two vials will give the amount of sugar. Thus, if the unfermented urine registers 1,050 and the fermented sample 1,020, we have thirty grains of sugar to the ounce, and the ounces passed during the day, multiplied by thirty grains, the total amount of sugar excreted." Of course, more delicate analysis will give the amount with greater precision, but this is precise enough for general work. In the discussion of the various forms of fever, the uses of the various antipyretics are intelligently given.

A MANUAL OF DISEASES OF THE NERVOUS SYSTEM. By W. C. Gowers, M. D., F. R. C. P., F. R. S. Second Edition, Revised and Enlarged. Vol. I.—Diseases of the Nerves and Spinal Cord. Philadelphia: P. Blakiston, Son & Co., 1892.

The first edition of Dr. Gowers' work on nervous diseases so fully met the wants of the general profession, by its clear yet concise account of those diseases, as to leave but little to ask for from the then standard of knowledge of the subjects discussed. In the five years since the first edition was issued, the advances in the study of nervous diseases have been so great as to require not only a thorough revision of the entire work, increasing the amount of matter by 150 pages, but in many cases a re-writing of entire subjects. In the revision the author has incorporated the results, not only of his own experience in private practice and extensive hospital work, but of the observations and investigations of others during the past five years in the line of definite facts, which would contribute to positive information. The result of the author's labors is one of the best works on nervous diseases for the general practitioner ever published.

PRACTICAL MIDWIFERY. A Hand-book of Treatment. By Edward Reynolds, M. D., Fellow of the American Gynæcological Society, of the Obstetric Society of Boston, etc.; Assistant in Obstetrics in Harvard University; Physician to Out-Patients of the Boston Lying-in Hospital, etc., etc. With One Hundred and Twenty-one Illustrations. New York: Wm. Wood & Co., 1892, pp. 421, 8vo.

This volume is the result of a large and varied experience in the management of the largest obstetrical clinic in this country, and is an attempt to furnish to students and inexperienced practitioners a full description of those practical details of conduct which are necessary to the management of every case of gestation, labor, or the convalescence therefrom. The book is well worthy a place.

THE POCKET PHARMACY, WITH THERAPEUTIC INDEX. A *résumé* of the Clinical Applications of Remedies Adapted to the Pocket-Case, for the Treatment of Emergencies and Acute Diseases. By John Aulde, M. D., Member of the American Medical Association, of the Medical Society of the State of Pennsylvania, of the Philadelphia County Medical Society, etc. New York: D. Appleton & Co., 1892, 204 pp., 12mo.

This small *brochure* is an attempt to popularize the use of the pocket-case, and is in the nature of a plea for small doses, to be administered in accordance with physiological deductions, in other words, provings upon the healthy. It is a beginning in the right direction, and probably is all that can be assimilated at first, by those for whom it is intended. We hope that the author will go on with this work and teach his fellows how to individualize medicines, so that polypharmacy may become the exception rather than the rule.

We congratulate the author on the start he has made, and we hope he may receive sufficient encouragement to induce him to continue his labors. Messrs. Wyeth & Brother will surely do their part of the work satisfactorily. We commend the book to our friends who are seeking more light in the administration of small doses.

A PRACTICAL MANUAL OF DISEASES OF THE SKIN. By George H. Rohe, M. D., Professor of Materia Medica, Therapeutics and Hygiene, and formerly Professor of Dermatology in the College of Physicians and Surgeons, Baltimore, etc., etc. Assisted by J. Williams Lord, A. B., M. D., Lecturer on Dermatology and Bandaging in the College of Physicians and Surgeons; Assistant Physician to the Skin Department in the Dispensary of Johns Hopkins Hospital. *No. 13 in the Physicians' and Students' Ready-Reference Series.* In one neat 12mo volume, 303 pages. Extra Cloth, price, $1.25, net. Philadelphia: The F. A. Davis Co., Publishers, 1231 Filbert Street.

FIRST LINES IN MIDWIFERY. A Guide to the Attendance on Natural Labor for Medical Students and Midwifes. By Ernest Herman. Philadelphia: Lea Brothers & Co., Publishers.

This little manual is admirably adapted for the purpose for which it has been prepared and contains, in a compact form, just the information needed for the student and the trained nurse.

A MANUAL OF AUTOPSIES. Designed for the Use of Hospitals for the Insane and other Public Institutions. By I. W. Blackburn, M. D., Pathologist to the Government Hospital for the Insane, Washington, D. C. Illustrated. Philadelphia: P. Blakiston, Son & Co., 1892, 84 pp., 12mo.

The *Century* has taken up the campaign for good roads. The April number contains a suggestive article on "Our Common Roads," by Isaac B. Potter, editor of "Good Roads" and a practical engineer.

The author points out the enormous loss to this country through the present general condition of American roads, a loss which falls not only upon the farmer, but upon city people as well, who are compelled to pay unnecessary prices for having produce brought to them. An American consul in France reports that the road system of that country (the most perfect system in the world) "has been of greater value to the country as a means of raising the value of lands than have the railways." In France every market-cart, with its broad tire, is a road-maker.

Mr. Potter's article is full of practical suggestions for the betterment of American roads, and it is fully illustrated.

Mrs. Gladstone's first article in the series of "Hints from a Mother's Life," which she has written for *The Ladies' Home Journal*, appears in the April number. The Journal has a circulation of over 700,000, costs only $1.00 per year, and is a most excellent paper for the home. Try it a year. Address, 429 Arch Street, Philadelphia.

Dr. Stowell, the former able editor of the *Microscope*, has commenced the publication of the *National Medical Review*, in Washington. The new journal is something in medicine like the review of reviews in general literature, giving the cream of the best articles in journalism.

CORRESPONDENCE.

TO MEDICAL CYCLERS!

The American Institute of Homœopathy meets at Washington, D. C., June 13, 1892.

Bring your wheel and enjoy a few days pleasure in "the paradise of cyclers," with its asphalt streets and many objects of interest.

Many short runs can be made to adjacent points, such as Fort Meyer, Arlington, Soldiers' Home, Brightwood, etc., and even longer runs, by those so inclined, to Harper's Ferry, or Frederick, or Baltimore.

Bring your suit, lantern and chain or safety lock.

Snatch a few days from professional cares for the improvement of your body and mind.

Free transportation of bicycles is furnished over the Baltimore and Ohio and other railroads entering Washington.

If you will go, direct a postal card to that effect to

T. H. CARMICHAEL, M. D.,
4830 Main Street, Germantown, Phila.

SUB-RETREATS FOR THE INSANE.

To the Editors of the NEW YORK MEDICAL TIMES:

It seems as if, in the last Annual Report of the Middletown Hospital for the Insane, "our Talcott" had struck *the* keynote of the "future Psycopathic Hospital for the Insane." In his most admirable suggestion of the establishment, in connection with the different insane hospitals of our State, of *sub-retreats*, wherein their patients (and their officers and employees as well) could obtain the immense curative advantages of change of scene, variety of surroundings and variation of atmospheric pressures, he has placed the capstone upon his previous admirably broad and well-founded views of "hospitalization." If Superintendent Talcott were never heard of again in our State, as connected with the care and treatment of the insane, this one suggestion would suffice to hand down his name to posterity.

It reflects his big heart, his active brain, his practical common sense. It is a great step in advance. Not that we shall immediately see it realized—reforms don't move with such velocity, but it will ultimately be realized; and, I hope, will be first put into practice in the Empire State. It is an expensive idea, but, in view of all the circumstances it will not, in actual practice, be found to be unduly *expensive*. It contains the *opportunity* of *cure* for so many hundreds of cases, and, as the years roll on, of so many thousands, to whom the present system of asylum management offers no such hope or charm.

It offers, also, the practical training for so many medical men and attendants, and the consequent enlarging of professional and public knowledge, and experience in the care of the insane, that its value as an education can not be overlooked. And I think, that those who come after us, will even see the "sub-retreat" idea carried into effect in connection with ordinary *general hospitals*. Why not?

It disposes, also, in a great measure, of the problem of "county asylums," by utilizing them for the purposes of these sub-retreats.

You, indeed, need make no apology, Messrs. Editors, for quoting so fully from Dr. Talcott's report, in the pages of your February issue; we only wish that every physician, and every legislator, and every county official in the State, were *compelled* to "read, study and inwardly digest" that report.

Yours truly,

Hill View, N. Y. HENRY R. STILES, M. D.

RELIEF OF TRUSS PRESSURE.

Owing to the unfortunate fact that a large percentage of humanity is condemned to wear a truss, any suggestion which may tend to relieve it of its more or less unavoidable discomforts seems worthy of consideration.

Even the veteran truss-wearer will usually find his comfort much increased by adopting the following simple plan:

Take a piece of shoemaker's webbing sufficiently long to reach round the hips and lap two inches, cut off another piece of same length and sew the edges of the two pieces together and line them with surgeon's lint. Sew to the belt thus formed, at convenient intervals, four button-loops to keep the truss in its place on the belt.

An extra piece may be attached to come between the truss-pad and the skin. A perineal strap can be used, if needed, and the belt fastened by a strong safety-pin. It will be found that this belt, with its absorbent lining, prevents the chafing and scalding of the skin, while greatly relieving the patient from the irksome pressure which more or less attends the wearing of the best-fitting truss.

Each patient should, of course, be provided with two of these belts, so as to change as often as necessary.

This belt also does well in cases of varicocele, and affords a much firmer and more comfortable support for the bandage (to which it may be easily buttoned) than the flimsy article for this purpose usually sold in the shops. I have know such a bandage, by its firm and equitable pressure, to reduce the size of the varicocele one-half during the first year of trial, and to relieve all sense of discomfort as soon as applied. The opening for the penis should be smoothly lined with Canton flannel, and in case of redundant scrotal integument, a part of the redundant skin should be drawn through the opening along with the penis.

This method of treating varicocele will be found especially useful in persons who will not consent to an attempt at a radical cure.

W. F. MORGAN, M. D.

Leavenworth, Kan., March 23, 1892.

OBITUARY.

DR. D. HAYES AGNEW, dean of the medical department of the University of Pennsylvania, and one of the best known surgeons of this country, died at his home in Philadelphia on March 22d, of a complication of diseases, at the age of 73 years. Dr. Agnew was one of the most brilliant surgeons and popular men in the profession. He was always a reserved, dignified gentleman, of exquisite tastes, sound culture, excellent physique, and devoted heart and soul to his profession, in which he was most active for half a century. Dr. Agnew was noted for being thoroughly practical, and this quality characterized all his work—as an operator, as a teacher, and as a writer. To his other qualities was added great modesty and a high sense of professional duty, and he was as highly regarded in his private life as he was professionally. His work as a surgeon and as a writer are too well known to the profession to require recapitulation here, and we will simply add that a great and good man, a most eminent surgeon, has gone to his reward. May peace go with him.

TRANSLATIONS, GLEANINGS, ETC.

Inebriety (*Quarterly Journal of Inebriety*).—In most cases inebriety is a self-limited disease. The drink symptom dies out naturally or concentrates in some other form of morbid impulse. Any remedies or means used at the time of change will be credited as curative. The cessation of the drink impulse is not followed by full restoration, yet the impression prevails that total abstinence is a sign of cure always. Many pronounced paranoiacs and diseased persons who have abstained from alcohol are posing as examples of cure from this or that means or remedy—persons in whom the drink impulse has died away naturally, no matter what remedy may be used. This is evident in the common class of those who sign the pledge, or profess conversion, many times only to relapse after each occasion. Finally, in apparently the same circumstances, they go through the same formula, and the drink impulse disappears forever.

The real facts are that some organic brain change takes place, the desire for alcohol ends. Other morbid symptoms may come on, but this disease has subsided or taken on new forms. The bark remedy, the mind cure, hypnotism, or any of the so-called specifics, that are followed by a cessation of a drink impulse, are all examples of this change. Physicians of asylums recognize this, and direct all their efforts to build up and bring the patient back to a normal physiological life, in expectation of the final cessation of the drink symptom and restoration of the organic processes. This result may come on at any time, and the object of all treatment is to encourage this, and remove the conditions which seem to provoke the drink symptom.

Drugs or restraint which holds the drink symptom in abeyance are never curative, and when followed by a subsidence of this impulse, it is an accidental conjunction of the natural dying away or change of brain function and growth. When such change occurs, after long treatment in the best physiological and hygienic conditions, it is reasonable to suppose that these means have contributed more or less to this end. But when this subsidence follows in conditions opposed to this, and from means inadequate to change or alter organic action, clearly some other forces are at work.

The self-limitation of inebriety, and the natural history and progress of the disease, are yet to be written.

The Favorable Time for Impregnation, and the Vitality of the Spermatozoa.—Prof. Bosse (*Archiv. Obstet. Gyn.*) has made some interesting studies on these points, about which considerable differences of opinion have prevailed among authorities. His methods, which should be studied in the original, were apparently conducted with the most scrupulous care, and the results he arrived at were as follows:

1. Of eight cases where the semen was deposited in the vagina before the menstruation and examined for afterwards, in four no spermatozoa were found; in three they were found alive; in one dead.

2. Of twelve cases where the semen was deposited after the menstrual period, in four no spermatozoa were found; in eight they were found living at from three to seventeen days subsequently. These investigations justify the author in concluding that the favorable time for impregnation is immediately after the catamenia, that the spermatozoa may retain their vitality for at least seventeen days in the vagina, and even through a menstrual period, and that cases of prolonged gestation may be explained by the fact that fecundation may have taken place a number of days after the last cohabitation.

While there is great liability to error in investigating so delicate a subject as this, yet these observations seem to have been very carefully made, and are a valuable contribution to the subject.

"Tin Dressing" for Chronic Ulcers of the Leg.—At a meeting of the Suffolk County (Mass.) Medical Society, Dr. Watson said that there was one principle in the treatment of chronic ulcers of the leg which he thought hastened the healing process materially. The analogy was seen in the freezing of a sheet of water. If the water were smooth, the skimming of its surface with ice went on more rapidly than if it were thrown into an uneven surface by the wind. In the same way, if the surface of the ulcer were made flat and smooth, the epithelium would extend across it more rapidly than if, like the rough water, its surface were occupied by granulations, and the open surface were above or below the level of the surrounding skin, as in the exuberant or indolent ulcer respectively. It had, therefore, been his practice in such cases as required it, to secure this condition by the application of a shield of sheet-tin on top of the ulcer to bring the surface even with the surrounding tissues. The dressing was known at the City Hospital as the "tin dressing," and its method of application was as follows: The ulcer and surrounding surface were soaked in corrosive sublimate, 1 part to 4,000, and thoroughly cleaned; a bit of protective was then placed upon the surface of the ulcer, covering a little more surface than the ulcer actually occupied; protective, or some substance having a perfectly smooth surface, was used, in order that the new epithelium, which shot in from the edges over night, so to speak, should not be pulled off by adhering, as it did to cheese-cloth, or compress, or anything having a meshwork-woven surface. The tin, made to fit the surface on which it was to lie, is then placed on the protective, and the whole, as well as the surrounding tissues, covered with a dry corrosive sublimate gauze dressing, which was held in place by an evenly-applied bandage extending from toes to knee.

Ulcers which had been lagging for days beforehand would often take a rapid start under this dressing.

Cocaine Antidotes.—S. Mitchell (*Medical Record*) has found that while ammonia, digitalis and brandy will relieve the milder toxic manifestations of cocaine poisoning, they signally fail when these symptoms are superseded by severe precordial pain, weak and rapid pulse, sighing respiration, borborygmus and belching of wind, muscular rigidity, and, later, paralysis of the whole body, except the brain, which is unnaturally active. In such a case he used a large teacupful of clear coffee, and has found it equally efficacious on subsequent occasions. It can be administered cold or hot. He makes no mention of amyl nitrite.

I. Gluck (*Ibid*) advocates dissolving the cocaine in a three per cent. solution of phenol. This, he claims, prevents the toxic effects of the former drug and renders the solution stable; as is well known, such solutions otherwise lose their anesthetic effects after twenty-four hours. Phenol, besides, has a certain anesthetic power of its own, forms a superficial eschar, which prevents absorption of the cocaine, destroys bacteria, fungi, etc., prevents decomposition in the solution, renders it aseptic, and wards off reactive congestion.

Cocaine Anesthesia in Major Surgical Operations.—In an article in the *International Journal of Surgery* for October, 1889, Professor Wyeth called attention to the manifold advantages of cocaine anesthesia in a large number of surgical operations, and demonstrated conclusively that when the drug was employed in proper dose and the injections properly made, no danger need be apprehended from its use. Indeed, a study of the literature of cocaine poisoning reveals either that, in many of the cases reported, the limits of safety as to dosage were greatly exceeded, or that effects were ascribed to the drug which were actually the results of the operative procedure practiced.

In a recent paper on the subject, Dr. Albers makes a plea for the employment of cocaine anesthesia in operations of major importance. He states that the injection of a five per cent. solution of cocaine is an excellent means of securing local anesthesia in operations upon large tumors, if their enucleation does not occupy more than a half or three-quarters of an hour. Solutions of a greater strength than five per cent. are not necessary if the drug is injected gradually; and, according to Dr. Albers, the anesthesia thus induced is superior to that resulting from the administration of chloroform in certain cases in adults, both on account of the absence of danger and the greater rapidity with which the anesthetic effects may be secured. He would, therefore, restrict chloroform anesthesia to operations upon children and nervous persons, and to surgical procedures of a protracted character.

Mediastinal Disease.—Dr. E. S. McKee, of Cincinnati, selects from the recent medical literature on the above subject the following:

Hare, in his Fothergillian Prize Essay, enters into this subject very thoroughly. He gives the records of 134 cases of mediastinal cancer, 98 of mediastinal sarcoma, 115 cases of mediastinal abscess, 16 cases of non-suppurative inflammation, 21 cases of lymphoma of the mediastinum, 7 cases of fibroma of the mediastinum, 6 cases of hematoma, 11 dermoid cysts, 8 hydatid cysts, 104 cases of various mediastinal diseases. The author makes a brief summary of his conclusions, as follows:

1. Cancer is more frequently found in the mediastinal spaces than any other morbid product.
2. Abscess is the morbid process next in frequency of occurrence.
3. Sarcoma occupies the third position as to frequency of occurrence.
4. Lymphomata and lymphadenomata occupy a fourth place, but are much more rare than the others mentioned.
5. The anterior mediastinum is affected far more frequently than the other two spaces.
6. Most mediastinal growths occur in adults.
7. More males are affected by forms of mediastinal disease than females.
8. Cancer and sarcoma of this space are necessarily fatal.
9. About 40 per cent. of the cases of abscess recover.

Edwards reports a case of carcinoma of the mediastinum in a child, and reviews 67 cases of mediastinal disease previously recorded. He finds mediastinal disease in children varies from that in adults, in that sarcoma is the most frequent morbid process, carcinoma next, and abscess third in order.

Naphthalin and Cataract.—Dr. Kolinski, writing in Von Graefe's *Archiv*, band XXXV. 2, points out that naphthalin, which is coming a good deal into use from the powerful effect it seems to have on the micro-organisms existing in the intestines in some cases of diarrhœa, possesses also the property of producing changes in the nutritive power of the blood, thus being liable to set up degeneration of the blood vessels. As the eye is one of the most highly vascular organs, it is one of the first to show any of the changes induced by interference with the nutritive property of the blood. Naphthalin is said, first, to cause small extravasations in the choroid and in the ciliary body, then ecchymoses and white patches in the retina, and finally cloudiness in the lens and crystals in the vitreous.

Diabetes.—A. Page Burwell, M. D., of Washington, reports a case of diabetes successfully treated with the usual diabetic diet and three grains of gallic acid and one grain of aqueous extract of opium in capsules three times a day, and two grains of cryotine night and morning.

MISCELLANY.

—A device has recently been invented for promoting deep breathing. It consists of a small belt that encircles the chest at the point of its greatest expansion, and a take-up mechanism to which the ends of the belt are attached. The take-up mechanism consists of a coiled spring, adapted to tighten the belt at intervals, and a train of wheels by which the speed of the spring in taking up the belt may be regulated. Upon the exhalation of the breath after the full expansion of the lungs, the chest returns to its natural size in ordinary breathing, thus leaving the belt loose. Immediately the take-up mechanism begins to gather in the slack of the belt, tightening it until its pressure is uncomfortable, compelling another inspiration, thus lengthening the belt. This lengthening is accomplished by the withdrawal of the strap from the case, thus lengthening the belt. It is claimed that the device induces full breaths at regular intervals, thus naturally enlarging the lungs and chest.

—Dr. Paul Gibier, in his report, states of the fifteen hundred patients he has vaccinated for rabies the fatality has been only one per cent.

—Dr. Blackman has used in extreme dryness of the tongue, one-twentieth grain tablets of pilocarpine allowed to dissolve on the tongue.

—Of the entire human race, 500,000,000 are well clothed, that is, they wear garments of some kind; 250,000,000 habitually go naked, and 700,000,000 only cover part of the body; 500,000,000 live in houses, 700,000,000 in huts and caves, and 250,000,000 virtually have no shelter.

—A French statistician, Mennier, estimates the consumption of gold for purposes of dentistry to amount annually in the United States to 1,800 pounds. Mennier declares that a century hence American cemeteries will contain more gold than now exists in France.

—A diet of oatmeal and brown bread is said to greatly promote the growth of hair on the bald scalp.

—A chemist of Bordeaux has made a discovery of an entirely new process for the preserving of meat in a state of perfect freshness. The preserving principle is the gaseous product of the distillation of charcoal in a closed vessel. Meats thus preserved during three and six months present as fresh an appearance as though just killed.

—In Berlin it is said that many deaths are due to the use of antipyrin.

—The *British Medical Journal* says that during 1891 the people of Padis consumed 21,291 horses, 229 donkeys and 40 mules—the meat weighing 4,615 tons. It was sold in the shops at from 2d. to 10d. per pound. Only one-third was sold fresh and undisguised, the rest being made into sausages.

—The Registrar-General of England and Wales says that the epidemic influenza of 1890 killed twenty-seven thousand people in those countries.

—The method of raising children in bran was proposed by M. Pue at the *Société Normande d'Hygiéne Pratique*. It consists of a cradle which has the wooden bottom taken out, and is then lined with a strong cloth. In this is placed sterilized bran to nearly half a yard in depth. A hair pillow is used. The baby has only a short flannel shirt on, and is naked from the navel downward. It is covered with a woolen blanket, and a wool-lined dress is kept to put it in when taken up for nursing. It has thus full liberty of movement in all its limbs, while its dejections pass at once into the pure bran, keeping the child dry and clean even if there is diarrhœa. This method is a cheap one, the bran not costing as much as diapers.

—Dr. McIntosh uses with good effect in gonorrhœa an injection of hydrastin combined with zinc oxide and plumb. acet. with water.

—A new fledged graduate advertises that he will pay one half the funeral expenses of all he fails to cure.

—Sparrow eggs, eaten in form of omelettes baked with butter and onions, are highly prized by the Arabs as an aphrodisiac. Arab physicians warn against daily indulgence in this dish.

—It is reported that the Servians have a curious custom of giving a parting kiss to their deceased friends before final burial, and the observance of it has caused a serious epidemic of diphtheria. The police prefect of Belgrade has accordingly issued stringent orders against the custom; prohibiting it for the present, however, only in the cases of those persons who have died from that malady.

—The Dean of the Medical Faculty of Berlin is 93 years old.

—The Town Council of Antwerp has ordered the establishment of a public homœopathic dispensary.

—Bromide of potassium, in doses of rather more than a drachm every half hour, is a most effectual remedy in cases of poisoning by strychnia. The physiological effects of strychnia and bromides upon the anterior columns of the spinal cord are directly antagonistic.

—Mr. Ernest Hart, in a recent address on the subject of hypnotism, mentions that in Austria a law has been passed for the shoeing of horses under mesmerism. If you stand in front of a horse so that it has to look at you fixedly, it becomes mesmerized.

—In the Illinois State Building at the World's Fair the women physicians, pharmacists and dentists will prepare an exhibit.

—The *Medical Standard* says: Cato has a homœopathic disciple in Dr. W. L. Morgan of St. Louis. Cato proposed to treat infantile diseases with cabbage. Dr. Morgan, at the late Homœopathic International Congress, reported that he had cured "a sour baby, with offensive stools, having the odor of boiled cabbage," by giving it the juice of boiled cabbage.

Dr. Anders, in the *Times and Register*, says: Where the heart muscle is weak, be the valvular lesion ever so well marked, you get very little murmur; sometimes none. On the other hand, where you have a strong cardiac muscle, a very slight lesion may give a decided murmur.

—Chicago Scotchmen have announced their intention to commemorate their immortal poet by building the Burns Free Hospital.

—Dr. Anna Epstein, a Russian woman, has been appointed the official city physician by the council of Pozarevatz, in Servia. She is the first woman elected to such a position in Europe.

—The statement that spectacles are used for horses, strange as it may seem, is perfectly true. The business of a well-known firm of opticians, in London, consists largely of the manufacture of horse spectacles. The object of these spectacles is to promote high stepping. They are made of stiff leather, quite inclosing the eyes of the horse, and the glasses employed are deep concave, and large in size. The effect is to give the ground in front of the horse the appearance of being raised; the animal therefore steps high, thinking he is going up hill or has to step over an obstacle. This system is generally adopted when the animal is young, and its effect on his action is said to be remarkable. It is found that the cause of shyingis, as a rule, is short sight, and it is now suggested that the sight of all horses should be tested. By a little artificial assistance, many valuable hunters which are optically unfit for their work can be made as valuable as ever.